THE WORKS

OF THE

Highly Experienced and Famous CHYMIST,

John Rudolph Glauber

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Title: The works of the highly experienced and famous chymist, John Rudolph Glauber containing, great variety of choice secrets in medicine and alchymy in the working of metallick mines, and the separation of metals: also, various cheap and easie ways of making salt-petre, and improving of barren-land, and the fruits of the earth.

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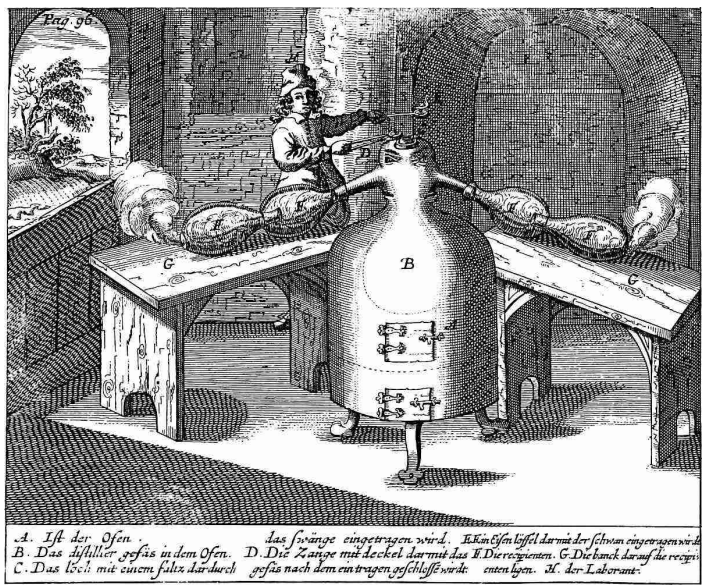
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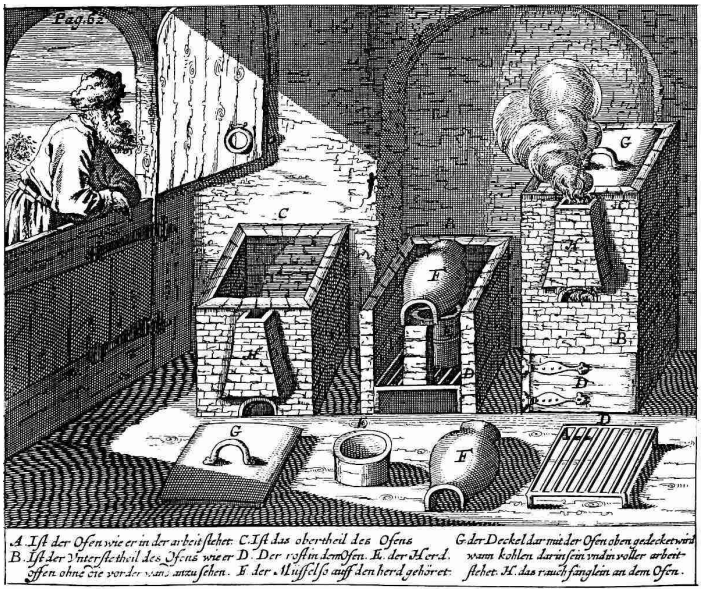
*** START OF THE PROJECT GUTENBERG EBOOK THE WORKS OF THE HIGHLY EXPERIENCED AND FAMOUS CHYMIST, JOHN RUDOLPH GLAUBER ***



A. Ist der Ofen.

B. Das distillier gefäs in dem Ofen.

C. Das loch mit einem faltz dardurch das swänge eingetragen wird.
D. Die Zange mit deckel darmit das gefäs nach dem eintragen geschlossē wirdt.
E. Ein Eisen löffel darmit der schwan eingetragen wirdt.
F. Die recipienten.
G. Die banck darauf die recipienten ligen.
H. der Laborant.



A. Ist der Ofen wie er in der arbeit stehet.
B. Ist der Vnterste theil des Ofens wie er offen ohne die vorder wand anzusehen.
C. Ist das obertheil des Ofens.
D. Der rost in dem Ofen.
E. der Herd.
F. der Müffel so auff den herd gehöret.
G. der Deckel darmit der Ofen oben gedecket wird wann kohlen darin sein vnd in voller arbeit stehet.
H. das rauch fänglein an dem Ofen.

THE

WORKS

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Highly Experienced and Famous CHYMIST,

John Rudolph Glauber:

CONTAINING,

Great Variety of Choice Secrets

IN

Medicine and Alchymy

In the Working of METALLICK

MINES, and the Separation of METALS:

ALSO,

Various Cheap and Easie Ways of making Salt-petre, and Improving of Barren-Land, and the Fruits of the Earth.

Together with many other things very profitable for all the Lovers of Art and Industry.

Translated into *English*, and Published for Publick Good by the *Labour*, *Care*, and *Charge*, of CHRISTOPHER PACKE, *Philo-chymico-Medicus*.



LONDON,
Printed by *Thomas Milbourn*, for the Author, and are to be sold at his House next Door to the *Gun* in *Little-Moorfields*; by *D. Newman* at the *King's-Arms* in the *Poultry*, and *W. Cooper* at the *Pellican* in *Little Britain*.
MDCLXXXIX.

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Imprimantur,

Tho. Witherly **Præses Coll. Med. *Lond.***

Joannes Betts
Edvardus Browne
Guilielmus Briggs
} **Censores.**

Gulielmus Dawkins

To The

Honoured, and Truly

Learned,

Edmond

Dickenson, M. D.

Physician to the KING'S

Person and Family.



he Art of Chymistry, (*Honoured Sir*) although in its Speculations most Noble and Delectable to a

Philosophick Mind, and in its Practice highly Inservient, and Beneficial to Mankind; yet hath it not escaped the Obloquies, and false Imputations of Detractors, and Calumniators, who either through Ignorance, Idleness, or Envy (or all of them conjoin'd) have made a false Representation of this most Noble Art to the World, and endeavoured to set Mankind at the greatest distance from that which is its highest interest to court. For which cause, such Writings as Promulge, and offer at the advancing of the *Chymical Art*, stand in need of such a Patron as is able to defend them against all the Cavils of Pride, Envy, and Ignorance.

And if the Exquisite Parts, and Profound Learning in the more Abstruse Philosophy, together with a Long, and Indefatigable Scrutiny and Labour in the Chymical Art, accompanied with a happy Practice in the Honourable Faculty of Physick, be fit Accomplishments to Entitle one a Mecænas of this Art; then are those Excellencies all met and Concentred in your self, as is evident to the whole World by your Curious and Learned Epistle to Mundanus, and his Answer to it, which answer will be a Lasting Testimony of your great Worth and Merit.

For certainly, Sir, it is no small evidence of your Worth and Abilities in the *Pyrotechnick Art*, that a Philosopher who had been more than forty years an *Adept*, in all that time should not find three Persons, besides your self, whom he thought worthy to make certain of the truth of what they sought, and aspired after; and yet gave you an Ocular Satisfaction and Certitude of that which Thousands have desired to see, but could not: And further seriously professing, that if he had had the same liberty from his Master,

that some *Adepts* enjoy, that he would have revealed to you the whole Secret.

These things have induced me humbly to offer this Book to your Patronage, not doubting but under your Name and Protection, it will be able to overcome many Difficulties, and obtain a free passage in this our *English* World, to the benefit and advantage of many well-disposed persons, who seek after Honest, Profitable, and Commendable Arts, which I am fully perswaded was the chief end of the Author in Writing; and I am sure is mine in Translating his Works. You are throughly acquainted with *Glauber's Writings*, you know his Menstruums, and his Medicines, and are able to attest the truth of what others may account false and impossible. As for such of them as concern the higher Classes of Chymistry, I shall say nothing (being yet but *ad Corinthum vergens*) but commit them to your Mature Judgment, and Protection, humbly craving your pardon for this my presumption, and for what Errors or Oversights I may have committed in this Work; and desiring your Favourable Acceptance of these my poor Endeavours. I take leave to conclude with a passage of the abovementioned Excellent Mundanus. *I am fully perswaded, that by the Blessing of God upon your Sagacious Labours, you will at length obtain that which will abundantly Compensate your Pains and Cost.* To which I adjoin my own hearty Wishes; and that after you have been as happy in this World, as true Philosophy can make a Man, you may be Eternally Happy in that which is to come.I am

SIR,

An Honourer of

Your Name and Learning,

CHRISTOPHER PACKE.

THE PREFACE TO THE READER.

That the Art of Chymistry *is very useful and highly serviceable in Physick, Chyrurgery, Husbandry, and Mechanick Arts, is long since evinced by the Excellent Mr.* Boyl *(the Honour both of our Age and Country) in his Experimental Philosophy, or Philosophick Essays; who in* Essay I. and II. *shews that the Examination of the Juices of Human Bodies, by the Art of* Chymistry, *may illustrate their Use and Nature. And that by it may be Explicated the Nature of our several Digestions, and their Aberrations. And afterwards* Cap. VIII. pag 194. *speaking of the advantages that* Chymistry *affords to the* Therapeutick *or* Curative *part of Physick, (which is the chief and principal), and to which all the other parts are subservient) is pleased to express himself thus:* I cannot but think that if *Chymistry* did no more than assist us, by the resolution of Bodies, to extricate their more active parts, and partly by such

Resolutions, and partly by associating Bodies together, to alter the former Texture of Natures productions, or present us with new Concretes of new Textures; by this very means, if Men want not Curiosity and Industry, to vary and prosecute Experiments, there must necessarily arise such a store of new and active Medicines, that in all probability, many of them will be found endow'd with such vertue as have not been (at least in that degree) met with, in the usual Medicines, whether Simple or Compound, to be bought in Apothecarys Shops; and consequently, even without any notable discovery, or improvement of Principles, Chymists (even as Matters now stand with them) may considerably add to the Pharmaceutical part of Physick. But if the Operations of *Chymistry* were seriously enquired into, and throughly understood, I make little doubt, but by a skilful Application of them, and especially by a series of them, in a Rational and Orderly way succeeding one another, there may be found out a great many preparations of Remedies, both very different from the common Ones, and far more Noble than they. *And presently after he adds.* That if we had but a few Potent Menstruums to dissolve and unlock Bodies with, I scarce know what might not be done in *Chymistry*. *Then further in that* Essay *where he treats of the usefulness of* Chymistry *to the Empire of Man over the Inferiour Works of Nature; he proceeds to shew that* Chymistry *is very serviceable to Husbandry in all its parts, and to other professions that serve to provide Men with Food or Raiment, or do otherwise minister to the Necessities or Accomodations of Life, as* Bakers, Brewers, Dyers*, &c.*

Thus far this Learned Philosopher: *To which I shall only add this, That if when he wrote those Essays,*

Chymists *were able to contribute so much to the Necessities and Conveniences of Mankind, when* Chymistry *was but young in* England*, and but few Chymists who were accurate in their Operations, and perhaps, fewer who had any competency of Learning, or so much as lightly Tincted with the* Hermetick Philosophy*; if, I say, that it discovered so great a light when it had but newly ascended our Horizon, and was, as I may say, but in its Infancy, what assistance may now be had from it, when (notwithstanding all the Obstacles, and unkind usage it hath met withal) it is grown to a more virile Age and Vigour: But although* Chymistry *be much enlarged, and advanced in* England*, in respect of the Numbers, and Qualifications of the Lovers, and professors of it; yet are not Chymists free from pressing Disadvantages, not having the freedom of administring their own Medicines, how powerful and salutiferous soever, and otherwise adapted to the Necessities of the Sick, than the common* Apparatus *of Physick. So, that as the Case now stands, the help and Succour which the Sick and Diseased receive from Chymical Physick, is but very small to what they might have, if knowing Chymists had the freedom of exercising that Art in all its parts, which with much Industry, Labour, and Costs, they have been sollicitous to attain. But when this disincouragement of ingenuity and Obstacle of the publick good, shall become more apparent to those in whose power it is to redress it, I do not doubt but it will meet with a Remedy.*

But now, to give some account of my present undertaking. I have at length (by God's help, and the assistance of my Subscribers) finished my Translation of Glauber*'s* Works*, and here present it to the Reader, in the* English *Tongue. How well I have performed it, I must submit to the judgments of others: I could have been very glad to have seen it done by some abler hand;*

but when I have heretofore proposed the doing but of some parts of it to those whom I knew might easily have accommodated English *Artists therein; telling them that I wondered so Excellent an Author, should be so long extant, and that none should unveil him of his* Latin *and* German *Coverings, and put him into an* English *Dress. I have had for answer, That this Age was not worthy of it; so that it seems to me, that the Providence of God had reserved it for fitter times, although to be done by one of the meanest of the Sons of* Pyrotechny. *But this I can say, that I have acquitted my self in this matter, as well as the slenderness of my Parts, weakness of Body, and the necessary Affairs of my Laboratory would permit me; but*

———Ubi desint Vires, acceptanda est Voluntas.

I desire the Lovers of Chymistry *to accept my Labours, with the same good will that I have undergone them, having no other end but to serve my Country. And I hereby return thanks to all those generous spirited Gentlemen and others, who have Subscribed to, and promoted this Work, without whose assistance (the Charge being very great, as well as the labour (to me) almost insupportable) it must yet have remained hid and unserviceable to the* English *Reader. But I am in an especial manner obliged to that publick spirited Gentleman (whom I ought to name, were it lawful to do it without his leave) who freely offered me and put into my hands a not inconsiderable part of the Materials for this Work, which part also had been more considerable than it was, had not the Spirit of some, (who unjustly hinder'd it) been as Mean and Sordid, as his was Generous. But that Loss was, in part, made up to me, by a well-minded Artist, to whom I also return Thanks.*

I have Printed this Book upon far better and larger Paper than I proposed to do it in; for at the time of

setting forth my first Proposals, I had not the German *Pieces, but when they came to my hands, upon a more accurate computation of the matter, I found that if I should go on to do the Work upon the Paper I had proposed, the Book would swell to too great a thickness for its breadth and length, and not be only ill shaped, but inconvenient to be read. By this means my Subscribers have a much better Book than I promised them, although the Charge hath also been Considerably greater to me, than I at first expected.*

The Reader hath all here in one Volumn which Glauber *ever Printed, as far as I can find upon diligent Enquiry at* Amsterdam*, where all his Writings were Printed, and where I purchased the Original Copper Plates belonging to them. But whereas, as 'tis said in the* Explication of Miraculum Mundi, *page 177. That the Cut there described was not Printed in the Latin Copies, nor to be found among the Original Plates; yet notwithstanding, I was unwilling that the Work should go without the Figure of so useful a Furnace as that is, for the Torrefying, or Calcining of Ores, and separating, and depurating their Metals, for which reason I have caused it to be Delineated and Printed with others before the* Continuation of Miraculum Mundi, *after page 188. I have also procured from the hand of another Friend, who is a Lover of Art, the Draught of the Refrigeratory, Furnace, or Instrument, which serves for the making the* Mercury of Wine*, purifying, and fixing of* Argent-vive, Antimony, Sulphur*, &c. and many other uses which an Ingenious Artist will find out. This Furnace the Author always endeavoured to conceal, but describes it in some part in the beginning of the sixth part of the* Spagyrical Dispensatory*, to which Description I have added the Figure. The Figures of the several Vessels and Instruments belonging to the Fifth Part of the Furnaces, are referr'd to at the beginning of the Fourth Part, but*

since, for the better orders sake I have placed them before the said Fifth Part.

These Twelve following Treatises were never Printed in Latin*, but in the* German *Tongue only,* viz. *The* Third*,* Fourth*, and* Fifth Centuries*; the* Second *and* Third Appendixes *to the Seventh Part of the* Spagyrical Dispensatory. *The* Book of Fires. Proserpine. Elias the Artist. The three Fire-stones. The Purgatory of Philosophers. De Lapide Animali. The Secret Fire of Philosophers. *All which I have caused to be Translated (my self being ignorant of the* German *Tongue) by a person well skill'd both in the* High Dutch*, and also in* Chymistry*, whereby I hope this Book will not be altogether unserviceable nor unacceptable even to the Learned; besides, all the Works of this Author that are in Latin are very difficultly (if at all) to be met with at any Book-sellers Shop in* London*, and those that are, at a dear rate: For when I had entered upon this Translation, I was forced to send to* Amsterdam *to have all the* Latin *pieces compleat.*

The Author in many places refers to his Opus Saturni*,* Opus Vegetabile*, and the* Concentration of Heaven and Earth*, which Treatises, I am assured, were never printed (at least under those Titles) which also seems to be manifest from his Epistle to the* First Century*, or General Appendix, wherein he inculcates, that for want of time, he had inserted the sum of them all in that Treatise. He also mentions a Seventh part of the* Prosperity of Germany*, in the Preface to the Second Part of* Pharmacopœia Spagyrica*, which was never Printed under that Title, but I am induced to believe it is the* Novum Lumen Chymicum*, as partly appears by comparing it with the foresaid Preface. And it is evident that in some parts of his Writings he hath mentioned a Treatise by one Name, and afterwards Printed it by*

another, as, The Testimonium Veritatis*, which was afterwards Printed by the Name of* Explicatio Miraculi Mundi. *As for the* Opus Saturni*, I have heard that there are some Manuscript Copies of it, and had hopes of obtaining it from two several hands, but both failed me. I have been also informed, that there are* Five Centuries *in Manuscript more than I have Printed, but could never understand in what hands they were, except one of them,* viz. *the sixth, the proprietor of which would not be so kind as to let me have it to print.*

I have (by the advice of an Honourable Person) left out the Author's Religious and Moral Digressions, where I could do it without prejudice to the matter; as also his Apologetical Writings, except his Apology against Farnner*, which I have printed, for as much as it is intermixt with many profitable Secrets, which perhaps, he would not have published, at least not at that time if they had not been, as it were, extorted from him by the ill Treatment of that Ungrateful Man.*

I could not place the several Treatises in that order which the Author published them, without breaking the order of the several parts, as of the Miraculum Mundi*,* Spagyrical Pharmacopœa*, and* Prosperity of Germany*; for being many years in publishing, they were done promiscuously, but how they succeeded one another so far as the* Nature of Salts*, the Reader may satisfie himself in the Preface to that Treatise. And as his Writings were published by piecemeal, so are the principal Secrets he teacheth, scattered up and down in divers parts of them, in one place he treateth of a thing obscurely, or but in part; in another place of the same thing openly in that part which he had veiled in the other. Sometimes he declares a Process very openly, omitting only some small Circumstances, or Manual Operation, which would seem to many either*

impertinent, or not necessary to be done, when notwithstanding, the business will not succeed without it. An instance of this may be given in his Sal Mirabilis*, whose preparation he teacheth obscurely in the* Nature of Salts*, but more openly in the Second Part of* Miraculum Mundi. *In the* Nature of Salts*, and in the Sixth Part of the* Pharmacopœia Spagyrica*, he teacheth how to Dissolve Gold therewith, and thence to make a kind of* Aurum Potabile*, but wholly omits the adding of a certain Vegetable Sulphur, without which, the work will not answer the Description; this Defect he supplys in the* Second Century*, after a twofold manner, the one not obvious to every Man's Apprehension, I mean the intent of the Author,* viz. *in those Processes where he shews the making of a Vegetable Sulphur; but the other sheweth the necessary Manual Operation in plain and open words. And this he hath done with all his Secrets on set purpose, that they should be found out by none but the Industrious.*

And this hath given occasion to many, who have not taken pains to read him with diligence, or not being experienced in Operating, to reproach him for an obscure, yea, even for a false Writer, because they have made two or three Superficial, or Unskilful Trials of his Processes, which have not succeeded according to their Expectations; when indeed, the fault was in themselves, either in not perceiving the Author's intention, or their own want of skill in rightly managing the Operation: And I know some Persons that sometime since said Glauber *had been too dark in his Writings, who now think he hath wrote too plain.*

But having mentioned this, I will here (for the sake of those Country Gentlemen, who have subscribed to this Work) a little Elucidate the Author's Process about the inversion of Common Salt, with Lime, for the enriching

of Poor and Barren Land. He indeed speaks of several Saline Preparations, which greatly promote the fertility of the Earth, but this with Common Salt, and Lime, is the cheapest of all, and also is most easie to be done, for any Plowman, or Labourer, having but once seen it done, may be presently able to manage it. The sum of it is, that Common Salt be turn'd from its sharpness, into an Alcalizate Nature (which is hot and fat) which then by its Magnetick force will attract from the Air a Vivyfying, Fructifying, Salt-nitrous power, and long retain it in the Earth, which is the cause of all Growth and Vegetation, as the Author sheweth in the Continuation of Miraculum Mundi*, and many other places; but gives the Process of the preparation in plain and open words in the Appendix to the Fifth Part of the* Prosperity of Germany*,* *page 416**.*

Neither is the practice of preparing either the Land, or the Seed, in order to the better Crop, altogether Novel, as may partly be seen in Virgil, Georgic Lib. 1. *where he saith,*

Semina vidi equidem multos medicare serentes,
Et Nitro prius, & nigra perfundere amurca;
Grandior ut fœtus siliquis fallacibus esset, &c.

Which in *English* may sound thus:

Some have I seen their Seeds to sow prepare,
With Nitre and Oyl-Lees, for they by care
Will grow far greater, and be sooner ripe, &c.

The Lime must be spread upon the ground, where no Rain can come to it, till it slake it self by the Air, and fall into a Powder; of this Powder you are to take four hundred weight to one hundred weight of any common foul Salt, which is too impure for the use of the Kitchen, where such may be had, otherwise clean Salt, (for that

will be cheaper than Dung) the Salt and Lime are to be well mixed, and then moistened with such a quantity of Water, (or rather Urine where it may be had) as will bring the Lime and Salt mixed, to the Consistency of a stiff Mortar. Of this Mass Balls are to be made about the bigness of ones Fist, and laid under a Shead, or Hovel to dry; being dried, they are to be burnt in a Kiln as Lime is, so that the Balls may be red hot for an hour at least; or where no Lime-Kiln is near, they may be burnt by building a Pile in the Field, first with a Lay of Wood, then a Lay of Balls, then Wood again, and so till all the Balls are placed fit for burning. When the Balls are burnt, they are to be again placed upon a Floor under a Shead, or Hovel, where they may be exposed to the Air, but kept free from the Rain, and if you break them with a Clod-beater presently, the Air will the sooner act upon them, and cause them again to fall into a Powder; which Powder may then be carried out and spread, or rather sowed out of a Seedlet, thicker or thinner as the Land shall require. Provided this be done in the beginning of Summer about the time of Fallow, for that being many Months before the Seed is to be sowed, the fieryness of this rich Compost will be Contemperated by the Air and the Earth, and changed into a Nitrous fatness, which joining it self with the Earth, is again Magnetically attracted by the Seed when it is sown, whose growth it thereby swiftly promoted, and its Multiplication much augmented. But if any should cast this Matter upon his Land soon after it is burnt, and presently after that should sow his Seed, instead of having a greater Crop than he used to have, he would have a less, or perhaps none, that Year, but the next Year, and soon for many Years, the same Land would bring forth plentifully. Therefore it is necessary, that this Matter should lie six or seven Months spread upon a Floor, and now and then turn'd with a Shovel, as you turn Malt, that it may be

Contempered, and Animated by the Air; or be cast upon the Land so long before the Seed be sown. The reason is the very same as with Dung, for none takes fresh Dung and spreads it upon his Land when he is about to sow his Seed, for if he should, his Seed would be burnt up; but the Husbandman lets his Dung lie some time to rot, as he calls it, after which he lays it on his Land, and lets it lie spread some time before he Plows it in, and all this is but to Contemper the heat of the Animal Salt contain'd in the Dung, and turn it into a Nitrous Nature. Thus much I thought good to say about this Matter in the plainest words, least any, not throughly understanding the Author's Intention, should erre in the first Experiment, and so unjustly blame the Author, and forbear themseldes and deterr others from prosecuting that easie Practice, which I am confident, if rightly managed, will bring much profit to many persons in this Nation. This must also of necessity be a profitable Work to those who will undertake it upon the account of making of Salt-petre*; especially to such as understand the Nature and Generation of that Excellent salt, which is of such incomparable use in the Preparation of Medicines, separating of Metals, and in many Mechanick Arts.*

Now for as much as in this Work Sal Mirabilis*,* Spirit of Nitre*, and* Spirit of Salt*, are recommended to very many uses, and every one that hath a mind to make Experiments with them, may not have the knowledge, or the conveniency of preparing them, I hereby signifie, that I intend (God willing) to prepare and keep by me the Author's* Sal Mirabilis *of both sorts, that peculiar* Spirit of Salt*, which he commends against the Scurvy and other Diseases, and also to keep Beer from sowring in the Summer, in the* Consolation of Navigators*. His* Panacea of Antimony*, and* Golden Panacea*, spoken of in the Second Part of the* Pharmacopœia Spagyr.*, the* Explication of Miraculum Mundi*, and divers other*

places. His Aurum Diaphoreticum*, also the* Tincture of Gold*, or* Aurum Potabile*, are described to be made of the* Irreducible Blood of the Lyon*, in the Sixth part of the* Spagyrical Pharmacopœia*, Chap. 22. These I purpose constantly to keep by me for the accommodating of Physicians, and others, who shall have occasion to buy them. Those are Excellent Medicines, and such as a Physician may have some confidence in; and indeed, this Book contains a great variety of such Medicines as will get a Physician Honour, which (I hope) will be tryed by all those who delight to do good, and be brought into use for the general Help and Comfort of the sick. For I freely confess, that if I have any thing in Medicine, beyond what is commonly known, I have had the Foundations of it from this Author; and if God shall please to grant me life to a fit time, I doubt not but I shall from those Foundations be able to raise such a Superstructure as shall testifie the truth of his Writings, and powerfully evince the Worth and Excellency of Chymical Medicines, and that demonstratively in matter of Fact,* viz. *by the Curing of both Acute and Chronick Diseases.*

And now by way of Conclusion, I have only one thing more to add; and that is a Request to all the Ingenious Lovers of Chymistry, that they would not occasion this Work which I have undergone with so much labour, and loss of time from my private Concerns, meerly for the good of others, to redound to my own hurt; my meaning is, That I might not be put to the charge and trouble of Letters about Curious Enquiries, wherein I am to have not the least profit: This I mention, because I have had divers such Letters come to my hands since I have been about it, and that sometimes two or three very long ones with many Queries, in one Week. Now should this continue, and I endeavour to satisfie all the Doubts, and gratifie all the Curiosities of all such non-considering persons, truly I should have no time besides what this

would take up, to provide for my self and Family. But notwithstanding what I have said, if any Ingenious Person shall stand in need of my Assistance, in preparing of any thing for him, or otherwise, wherein I may have a reasonable recompence for my Time and Trouble, I will be ready to give him the best assistance I can. For I am now but just ready to receive a Writ of Ease from three Years daily labour and care about this Work, and I would be willing to enjoy it some time, that I might again with diligence apply my self to my Laboratory, the effects of which, if God shall see good, may at one time, or other, shew themselves to the World. In the mean time, I wish all Honest and Ingenious Lovers of the Spagyrick Art, good success in their Studies and Labours, that thence the Penuries and Miseries of Mankind, especially of the sick, may be effectually remedied; that they may Cooperate as Instruments with the great ends and providences of the Almighty, to bring about that time, in which God shall be Glorified all the World over, and Men live in a more serene and tranquil condition than yet they have done, which shall always be the Desire and Prayers of him that is a Lover of Pyrotechny*, and Honourer of all true Artists.*

Chr. Packe.

From my House next Door to the Sign
of the *Gun* in *Little Moor-Fields*, the
1688.

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THE FIRST PART OF Philosophical Furnaces.

Containing a new Art of making *Spirits*, *Oyls*, *Flowers*, and other Medicaments, by the help of the first of those Furnaces, after a very easie and peculiar manner out of Vegetables, Animals and Minerals: With their Chymical and Medicinal use.

A *Preface* to the Courteous Reader.

I have hitherto reserved to my self as Secrets, some peculiar Furnaces and compendious Ways of Distilling, which with diligent study and speculation I found out some few years since, by which many excellent Works, impossible to be done by the vulgar Art, may be

performed; but now at last I have, considering with my self how advantageous it may be to the World, determined to conceal this Art no longer, but for the good of my Neighbour to publish it, by giving to Chymists *a perfect and fundamental information of this new-invented Art, that they may no longer for the future spend their Time and Money in long tedious Operations, but may after a more easie way, by the help of my Furnaces, be able to effect many excellent things. Now this Book shall be divided into Five Parts, the first whereof shall teach how to build a Furnace, in which incombustible things are distilled and sublimed, and indeed such things which cannot be done by Retort or any other Vessels, and how the Spirits, Flowers, and Oyls of Minerals, and Metals may by the help thereof be prepared, as also what their Use and Vertues are.*

In the Second Part shall be shewed another Furnace, in which combustible things, as Vegetables, Animals, and Minerals are distilled and most perfectly subtilized: by help whereof many most excellent Medicaments for the cure of most grievous and otherwise incurable diseases may be prepared.

In the Third shall be taught a certain new invention hitherto unknown, of distilling Burning Spirits, as of Wine, Corn, Fruits, Flowers, Herbs and Roots; as also the Waters of Vegetables and Animals, and that in a great quantity, in a short time, and without much costs; as also of boyling Beer, Mead, Wine, and other things, which otherwise are made in Copper or Iron Vessels; and all this by the help of Wooden Vessels, and benefit of a certain small Copper, or Iron instrument of two or three pound weight, and that after a certain easie manner without Furnaces. This newly-invented Art doth also teach divers Chymical Operations, as Putrefactions, Digestions, Circulations, Extractions, Abstractions,

Cohobations, Fixations, &c. *And this invention is very necessary and profitable for young beginners in this Art, for they need not in the making of burning Spirits, Waters of Vegetables, Extracts, and other Medicaments so many Furnaces, and so many Copper, Iron, Tin, Earthen and Glass Vessels, for it is here taught how all the aforesaid Operations may be done onely by the help of a certain small Copper or Iron Instrument in Wooden Vessels as well as by Alembicks and other great Copper Vessels, by which means a great deal of Costs is saved.*

In the Fourth Part shall be taught another certain, and hitherto unknown Furnace, in which all Chymical Operations may most easily be done: being most profitable for the trying of the Natures of Minerals and Metals; as also for the proving, examining, melting, cupelling, and separating of Metals, that nothing may be lost of them, and that after a compendious and easie way, and also to great advantage.

In the Fifth shall be taught how to make and prepare Iron, Earthen, Glass, and other kind of Instruments necessary for the aforesaid four Furnaces, as also other necessary, and most profitable Manuals.

And in the First Part, the Fabrick of the first Furnace being delineated, I shall also shew how by the help thereof may be made Spirits, Oyls, Flowers, and other most profitable Medicaments, also their Vertues and Use, and that as faithfully as I may, and without fraud. And truly I do not doubt but those of understanding will approve of this Work, but ignorant Zoilus's *will contemn it: For it is said according to the Proverb,* He that builds by the highway, will hear many things from them that find fault*, and especially from the vulgar,* &c. *But it would be well if those* Thrasoes *would put forth something more excellent, before they find fault with and carp at other Mens pains and labours.*

Wherefore let no one rashly judge of this Work, untill he be throughly informed concerning the same, and then I do not doubt but the Authour shall be by him commended.

And if haply all things shall not presently succeed well, to his mind, with him that shall build this Furnace, and operate therewith, let him think with himself that perhaps he hath erred in some part, (for it is a new and unknown work, in which any one may easily err) and not presently therefore murmur against the Authour, blaming him, because he hath not wrote clear enough, but let him ascribe it to his own ignorance, and let him study to understand the Authour's meaning, and still be practising upon it, and then I do not doubt, but he will have better success, which I pray every one may have. Amen.

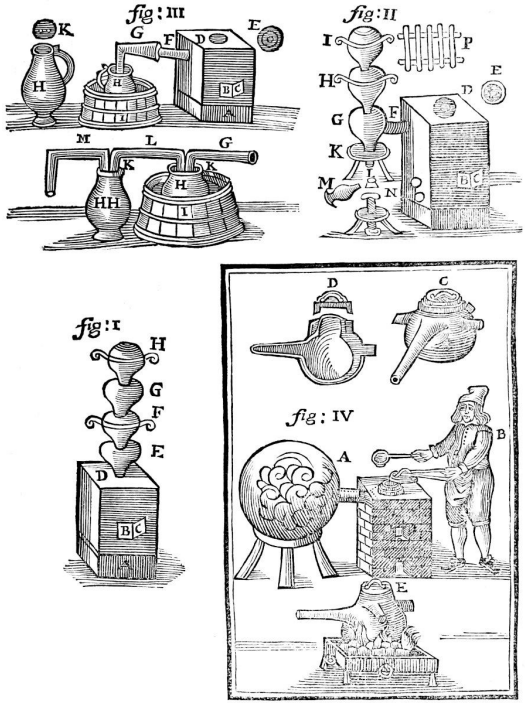
The EXPLICATION of the Figures of the first Furnace in all its parts.

FIG. I. **E.** *The first Subliming-Pot, which is set into the upper hole of the Furnace.* **D.** *The upper hole of the Furnace.* **F.** *The second Pot.* **G.** *The third.* **H.** *The fourth.*

FIG. II. **A.** *The Ash-hole, with the wideness of the Furnace.* **B.** *The middle hole, by which the Coals and Matter to be distilled, are cast in.* **C.** *A Stopper of Stone, which is to stop the said hole after casting in the matter.* **D.** *The upper hole with a certain false bottom, which is to be filled with Sand.* **E.** *The Cover of the upper hole, which is put on after the putting in the Coals and Materials.* **F.** *A Pipe going out of the Receiver, and joyned to the first Pot.* **G.** *The first Receiver.* **H.** *The second.* **I.** *The third.* **K.** *A Stool on which the first Receiver stands, having a hole in the*

middle, through which the Neck of the first Pot, to which a Dish is annexed, passeth. **L.** *The Dish through the Pipe whereof the refrigerated Spirits distill.* **M.** *A Receiver into which the Spirits collected in the Dish do flow.* **N.** *A Screw to be raised higher at pleasure for the better joyning the Receiver to the Pipe, and it goeth through a Stool.* **O.** *The place of the Pipe for the Distilling of Spirit of Vitriol and Allom.* **P.** *A Grate consisting of two strong cross Iron Barrs, fastned in the Furnace, and four or five more less, that are moveable, for the better cleansing of the Furnace.*

FIG. III. **G.** *The first crooked Pipe fitted to the Pipe of the Furnace.* **F.** *The Pipe of the Furnace.* **H.** *A Receiver fitted to that Pipe, and set in a Tub of water, for accellerating the Operations: which Receiver hath a Cover with two holes, through the first whereof goeth a single crooked Pipe, and through the other two crooked Pipes, whereof one goeth into the Receiver, as did the single, and the other out of the Receiver* **H**, *into* **H. H. I.** *The Tub of Water.* **M.** *A third Pipe. By this way Flowers are sublimed, and Spirits distilled speedily, and in great quantity.*



The Second Furnace.

THE

FIRST PART

OF

Philosophical Furnaces.

Of the Structure of the First Furnace.

As for the first Furnace, it may be built greater or lesser as you please, a regard being had of the quantity of the Matter to be distilled, and also either round or square; either of Bricks, or by a Potter with Potters Clay. Now when the Diameter is of one span, *viz.* withinside, the height must be of four, *viz.* one from the bottom to the grate, another from the grate to the hole made for putting in of Coals, and two from thence to the top of the Pipe, which must at least go forth out of the Furnace one span, lest the receivers should by the neerness of the Furnace be heated. The Pipe also must have on the fore part a Diameter, answering the third part of the intrinsecal Diameter of the Furnace; also a little larger on the hinder part than the forepart. Let the grate be such an one, as may be taken out at your pleasure and made clean, being stopt by the Matter that is cast in and distilled:

for it is easily stopt in distilling of Salts melted with the coals, whereby the aire is kept from coming to the fire, and the distillation by consequence hindred: Or let there be put into the Furnace cross-wise two strong iron bars, upon which lay four or five lesser, distant the one from the other the breadth of a finger, going a little out of the Furnace, by which when they are stopt, you may take them out with a pair of Tongs, and cleanse them from the burnt Matter, and then again put them into their own places: wherefore also the Furnace must on the fore part be open under the grate, that you may the better order the grate.

Also the grate must have above, a covering of Iron or Stone, with a hole in the middle thereof with a certain distinction, which is to be filled with sand, that the cover may the better and more fitly shut the hole, and prevent the exhaling of the spirits which by this means will, being forced, go forth thorow the Pipe into the receivers, after you have cast in the matter which is to be distilled.

Of the Receivers.

Let the Receivers be made of glass, or of strong earth, which may retain the spirits, and such is the Waldburgick, Hassiack, Frechheimensian, Siburgic earth, *&c.* They are better that are made of glass, if they are to be had, and those especially which are made of strong and firm glass, which may be smoothed about the joints with a Smiris stone, and so fitted that they may the better be joyned together, and then they need not luteing (but how they shall be smoothed with the Smiris stone, and be fitted, shall be taught in the Fifth part, which treats of Manuals) because by this means they are joyned so

close, that no spirits can go through the joynts: otherwise you must close the joynts with the best Lute, such as will not let the spirits exhale, which shall be taught in the Book treating of Manuals. The form of the recipient you may see in the delineation thereof. As for the quantity thereof, know that by how much the greater they are, so much the better they are, for then you need the fewer, but the more, by how much the lesser they are. Let the superiour orifice be larger than the inferiour, so that alwaies another receiver may with its inferiour orifice be joyned to it, and let the inferiour orifice have a Diameter of three fingers breadth, or thereabouts; I mean in case the Diameter of the Furnace be of one span. For a greater Furnace requires greater holes, as also orifices of the receivers, by which means a sufficient and due proportion of air may be given to the fire: or if the Diameter of the Furnace be more than a span, it must also have two or three pipes (which being considered together, should have a wideness answering the wideness of the third part of the Furnace, for so great a wideness, and so much air is required, if the fire burn freely and do its office) to which vessels of the aforesaid proportion must be applyed, that the fire be not choaked.

Now, the Figure that is annexed will teach the conjunction of the Receivers, as also their application to the Furnace. And, in the first place, the Receiver stands in a three-foot stool bored thorow in the middle, that the neck of the first Receiver may pass thorow, to which is applyed a dish with a pipe receiving the dropping Spirits: To the first there is joyned a Second, and to that a third, and so consequently (*viz.* near unto a wall or ladder) so many as you please. Let the upper Receiver, and indeed all the rest, be left open: To the lower as hath

been said, is joyned a dish with a pipe, by which the distilled Spirits run down into another certain glass vessel added thereunto, which being filled, is taken away, and another is set in the place of it, because that is set under it without luting, and therefore may easily be changed. And if you please to distil any thing else, you may take away that dish with a pipe, and make it clean, and then joyn it close again (that no spirit may breath forth) to the neck of the lower receiver. And if that dish cannot be so closely joyned, that nothing exhale, pour in a spoonful of Water, for that doth astringe, neither doth it hurt the spirits, because in the rectifying it is separated.

Of the subliming Vessels.

These you need not make of glass, or of such earth as may retain the spirits, as hath been above mentioned; it is sufficient, if so be they be made of good common Potters earth, and be well glazed within, *viz.* of such a form and figure, as appears by the annexed delineation.

Yet you must chuse good earth that will endure the fire, for the lower pots are so heated by the fire, that they would be broken if they should not be made of good earth.

Now I will shew you in general the manner it self of distilling; as also, the manual necessaries in every distillation.

The manner of Distilling.

In the first place, let there be some burning Coals put in, which afterwards must be covered with more until the Furnace be full almost to the pipe, which being done, let not the uppermost cover be laid over

its hole (that the heat and smoak may pass that way, and not thorow the pipe, and receivers, which will thereby be red hot; and this will be a hindrance to the distillation) until the fire be sufficiently kindled, and the Furnace be throughly hot; then cast in, with an Iron ladle, of the matter prepared for distillation as much as will cover the Coals, which being done, stop the Furnace very close, by pressing down strongly the upper cover upon its hole or sand, which is put in the lower part of the hole, being a place made for that purpose. Now let him that casts in any thing thorow the middle hole, presently stop it with a stopple of stone, and that very close, for by this means all those things which were cast in, will be forced, after the manner of a thick Cloud, to break forth through the pipe into the receivers, and there to condense themselves into an acid spirit or oyl, and thence to distil into the dish set under, through the pipe whereof they do yet distil down further into another glass receiver. The Coals being burnt out, and all the spirits being come forth, you must cast in more Coals, and more materials, until you have got a sufficient quantity of Spirits. In this way of distilling, you may at your pleasure cease, and begin again without any danger.

When you will make clean the Furnace, you need do nothing else, then draw out the Iron bars that lye on the cross bar, that the *Caput Mortuum* may fall down, which afterwards may be taken away with a Fire-shovel, which being done, you must put in the bars again, and lay them on the cross-bars as before, upon which you must cast burning Coals, and upon them others, until there be enough, then on them all, being well kindled, cast your materials.

When you go to make clean the receivers, and to

begin to distil another thing, you need not remove them, but only pour pure Water into them, *viz.* by their upper receiver, by the descending whereof the other are purified.

And by this way, not only out of Vegetables, and volatile Minerals (incombustible) but also out of fixed Metals and Stones, spirits, oyls, and flowers, are drawn forth wonderfully, easily, and in good quantity, which otherwise could never have been done by the vulgar art of distilling.

Now, in this Furnace are distilled only such materials, which being distilled, yield an incombustible humidity, as common Salt, Vitriol, Allom, and other Minerals and Metals, each of which doth yet require their peculiar manuals, if operated upon.

Now, because this Furnace doth not serve for every matter, because the materials to be distilled are cast upon burning Coals, which are things Combustible, I have determined in the second part to give another, *viz.* a lesser, unlike to this, yet convenient to distil all combustible things that are endued with volatile spirits, as Tartar, Harts-horn, Amber, Sal Armoniack, Urine, *&c.* There are, by the help hereof, made most subtile, volatile, sulphureous spirits of Salts, and Minerals, as of common Salt, Vitriol, Allom, Nitre, Antimony, and of all other Minerals and Metals, which otherwise, without this Furnace, could not have been made, with which spirits, wonderful things are performed in Medicine and Alchymy, as in the Second Part shall be demonstrated more largely.

Now I will shew you a way to make other Receivers belonging to the first Furnace, and indeed, such as are more fit for some Operations, as the former were more fit for others: wherefore let him

that will operate, chuse these, or the other, as he pleaseth.

As therefore the former being erected upwards by a wall, or ladder, by which means the spirit might ascend from one into another so long, until being refrigerated and condensed might again drop downward into the dish that is annexed thereto: so these are a contrary way set and placed collateral in a vessel filled with cold Water to condense the spirits, by which means you need not so many receivers; also they must not be fashioned like the former, as to be open above, and below, but only above like pots that serve for boyling: but this you must observe, that by how much the deeper and larger they are, by so much the better they are.

Also you must joyn them together by the help of earthen pipes, being so distinct, that the spirits may be kept back, being yet hot (and not refrigerated) from passing out of one into the other, but being forced through the middle of the separation of the pipes, may go to the bottom of every receiver, and thence arise by another pipe into another receiver that hath a double cover like the former, where again descending to the cold bottom, remain refrigerated and condensed. Now three or four of these are enough (whereas of other, thirteen or fifteen are required) a regard being had of their Greatness.

You may see the figure of these receivers, as also their joyning together by the annexed delineation. Now, for the most part, one is sufficient for him that distils a few things, especially if the matter be not pretious, and then let one crooked earthen pipe at least be joyned, one arm with the pipe that goeth forth of the Furnace, the other with the Receiver, but

so that it go into the receiver downwards, even to the middle thereof, and then you need not shut the orifice of the receivers, for it is no great matter if somewhat evaporate, *viz.* if the matter to be distilled be not pretious. And by this way may new spirits and new flowers be made every hour, with the help of one Furnace, and one recipient, but with this caution, that for every new distillation, the recipient be washed with Water before it be put to the pipe; which being put to, you may then cast your species into the Furnace; and this do till you have a sufficient quantity of spirits.

And this way of distillation serves especially for the trying of the natures and properties of many and divers Minerals, such as yield in the fire spirits and flowers. For it would be too tedious in every new distillation to apply a new and distinct receiver: as also many studious of the Chymical art would quit their study, being able to make by retort but one tryal in a day. And no wonder if expences, and loss of time should deter many.

Now here there is no need of many Retorts, nor of luting them, nor of receivers, and such like superfluous things; neither is there here required the constant presence of the operator, the observation of the regiment of fire, the neglect whereof would otherwise endanger the loss of the retorts and receivers, and by consequence the loss of labour. These and such like tedious things are not here to be cared for, because it is sufficient only to cast the Matter upon the coals, and cover the Furnace, and then presently go forth the spirits, and flowers of the same kind with their mineral: of which when thou hast got a sufficient quantity, thou must draw out the Iron bars, upon which the coals lye, that they may

fall down, and be taken away; and whilst the Furnace is yet hot, to put in the Iron bars again, and upon them to lay fresh coals, which then will of their own accord be kindled with the heat of the Furnace. In the mean time you must take away the receiver, and make it clean and set it to again, or if you had rather put another clean one, *viz.* for the new distillation of another Matter.

And by this way, divers things may be in the space of one hour distilled, and sublimed, *viz.* in a small quantity. But he that will distil, or sublime in a greater quantity, let him take three or four pots that the spirits may pass from one into another, that nothing thereof be lost. Here needs not (as I said before) the continual presence of the operator, for he may be gone, cease, or repeat as he please, because the work is without danger of breaking the retorts, and receivers.

He that knows the use of this Furnace, may do many things in a short time with little cost. For any one may do more by the help thereof in one hour, than in the common way in twenty four, by which way also there is a great saving of coals, because ten pound of coals will do more this way than a hundred the other. As for example, he that will try, shall make a pound of spirit of Salt in one hour with three, four, or five pounds of coals; whereas after the other way are required fifty of sixty pounds, and at least twenty or thirty hours time, *viz.* in the common way by the help of retorts: which is indeed very tedious.

Also by this way may be made the flowers or minerals, and metals, in a great quantity, very easily, and in a short time without great cost, so as that in one hours space, with three or four pound of coals may a pound of the flowers of Antimony be made.

And this is no small help to the Physitian, and Chymist.

Moreover this furnace being once built, endures for many years, and being broken is easily repaired.

And by this way you shall need only materials to be distilled, no retorts and receivers are in danger, by which means much cost is saved.

Besides the aforesaid ways, I have yet another, and that more compendious, *viz.* of distilling, and subliming, and more easy, by which means in a very little time, an incredible quantity of spirits of Salts, and flowers of Minerals, and metals may be made; which I shall refer till another time, because for the present I have said enough.

Now I do not doubt, but diligent Chymists will follow my steps, and find out those things which are unknown to me. *For it is easier to add to things found out, than to find out things unknown.*

The construction therefore of the furnace being in my opinion clearly shewed, there now follows the manner of distilling, and subliming with it.

Although haply, and contrary to my hope any obscurity should be met withal, yet one process will explain another: and the diligent operator, and searcher of Nature shall without doubt, by his practise attain the effect after the same manner as I have prescribed: which together with the blessing of GOD, I heartily wish all pious Chymists, *Amen*.

How the Spirit of Salt is to be distilled.

The reason why I enter upon the spirit of salt, before I say any thing of the spirits of vegetables, is this, *viz.* because it is even the chiefest, which can be made in

this furnace: for few exceed this in strength and vertues; wherefore I also have given it the preeminency. Neither is there any of the acid spirits, about which the Chymists hitherto have been more busied, than this, wherefore also it is of all, of greatest price, *&c.* for some have mixed salt with potters clay, and have made this mixture into little balls, which they have to get the spirit, forced by retort in a very strong fire: some have mixed salt with bole, some with the powder of tyles, others with burnt Allume, *&c.*

Others using a more compendious way have made salt to flow in a retort, which hath a pipe both in the upper, and hinder part; by the uper pipe of which they have dropped in cold water, to elevate the ponderous spirits of the salt, but by the hinder they have blown with Bellows, to force the spirits into the retort: and this way is not altogether to be slighted, yet it hath this inconveniency, that in process of time the retorts are broken that they can no longer retain the salt, and so the distillation is intercepted. Some have attempted it with Iron retorts, but by this means the spirits have been deaded, because they easily set upon the Iron, whence instead of spirit they have had flegme. And such, and other tedious wayes of distilling they have invented; and by the best of them indeed they could scarce distill one pound in 25. or 30. hours space with 50. 60. or 100 pound of coals; this being the reason, because the salt is very little wrought upon, and therefore it is that few ever had the spirit right and good, whence also the vertues thereof have been unknown.

And this therefore I was willing to make known, that it might appear, what price this spirit hath hitherto been of, and how easie, and abundantly, and

with what little cost, it may after my new invented way be made.

It is said above, that the materials may in this way of distilling be immediately cast into the fire; yet this must be wisely understood. For although some of the species may without any preparation be immediately cast into the fire, yet it doth not follow that all and every one of them must: for in some of them we must use our discretion, as in the distilling of salt. For if the salt be immediately cast into the fire, it will not only yield no spirits, but will leap so long upon the coals, until it find a descent to the lowest part of the furnace: Now this may be prevented divers wayes; and first indeed after this manner: Dissolve salt in common water, then quench burning coals with this water, that they may be impregnated with the salt, which afterwards set on fire in the furnace: but you must first cast in other burning coals, upon which you must cast those that are impregnated with salt untill the furnace be full, as is above said: and while the coals burn, the salt is resolved by the force of the fire into spirit.

Now you must observe that he that distils spirit of salt after this manner, must make choice of glass receivers, because the spirit whilest it is hot, penetrates by reason of its wonderful subtilty, those that are earthen. And this spirit is of a most grateful taste. But in defect of glass receivers, I shall shew you another way wherein you may use those that be of earth.

Mix salt, and vitriol or allome together, grinding them very well in a Morter (for by how much the better they are ground, the more Spirit they yield.) Then cast this mixture into the fire with an Iron Ladle, *viz.* so much of it as will be sufficient to cover

the coals, and then with a great fire the spirits come forth into the receivers, where being coagulated, they distill down into the dish, and thence into another receiver. And if thou knowest how to work aright, the spirits will like water continually run out thorow the pipe, the thickness of a straw; and thou mayest easily every hour make a pound of the spirit. Now the reason why thou shalt by this way have more spirits than by the other, is this, *viz.* because the vitriol and allome, which is mixed with the salt, makes it flow quickly, by which means it is prevented from falling down through the coals to the lower part of the furnace, but sticking to the coals is almost all of it turned into spirits. The *Caput Mortuum*, which is reddish, easily falls with the ashes through the grate, and can no more be distilled, but yields by excoction a white fixed salt, which serves for the flowing of metals; and being dissolved in warm water serves also for a glyster against the Worms, which it kills, and purgeth also the Bowels.

Thou wilt object, that the spirit made after this manner, is not the true spirit of salt by reason of the mixture of vitriol and allome, but mixed, and compounded. I answer; There can by this way distil no spirit of vitriol, or allome, being that which I often tryed, casting vitriol or allome into the furnace, where I received no spirit at all; the reason of this is, because these spirits are far more heavy than the spirit of salt, neither can they ascend so great a heighth, *viz.* of three spans, but are burnt, whence unless the flegme, nothing distils. Wherefore the spirit of salt that is made after this manner is not mixed, but pure and meer spirit of salt, of the same tast and vertue as that is of, that is made by it self; because in this furnace the spirit of allome and vitriol, cannot be made unless a pipe go out of the

furnace neer the grate, as you may see by the delineation of the furnace, for otherwise it cannot be made; besides, these spirit are better, and more truly taught in the second part. And if it be granted that somewhat together with the spirit of salt comes forth (which is yet impossible) what hurt I pray you comes from thence either in the solution of metals, or medicine? wherefore the spirit made after this way is not to be suspected. Yet I will satisfie the incredulous, and will shew him another way without the addition of allome or vitriol, for the distilling of that spirit, but that will be in the second part of this Book, where I will teach you the furnace, by which is made spirit of Nitre, Aquafortis, and amongst combustibles, the Oyles of vegetables, and Fats of animals and other things which cannot be made by this: and by this way I will satisfie those, who are not pleased with the former.

Now for want of glass receivers, we are forced to use earthen, but these cannot retain the spirit of salt made after the aforesaid wayes, in which case I could indeed discover a certain little manual, by vertue of which the aforesaid spirit may be received even in a great quantity in earthen recipients: but for certain causes I shall here be silent, and shall refer it till the edition of the second part. Let it suffice therefore that I mentioned such a thing, wherefore omitting that, I shall proceed to shew you the vertues, and use of this spirit, as well in Alchymy, as in Medicine, and other Mechanical Arts.

Of the Use of the Spirit of Salt.

It is worth while, to speak of the power, and vertues of this excellent spirit; what other Authors have clearly described, I shall here pass over, and refer the

Reader to the Writings of those Authors; touching only on some few of which they said nothing.

The Spirit of salt is by most accounted a most excellent medicine, and safely to be used, as well inwardly as outwardly: It extinguisheth a preternatural thirst in hot diseases, abstergeth and consumeth flegmatick humours in the Stomack, exciteth the Appetite, is good for them that are hydropical, have the Stone, and Gout, &*c*. It is a menstruum dissolving metals, excelling all other therein: For it dissolveth all metals and minerals (excepting silver) and almost all stones (being rightly prepared) and reduceth them into excellent medicaments. It doth also many excellent things in mechanical arts.

Neither is it to be slighted in the kitchen, for with the help thereof are prepared divers pleasant meats for the sick as well as for those that are in health, yea and better than with Vinegar, and other acid things: and it doth more in a small quantity, than Vinegar in a great. But especially, it serves for those Countries that have no Vinegar. It is used also instead of Verjuice, and the juice of Lymons. For being prepared after this way, it is bought at a cheaper rate than Vinegar or juice of Lymons. Neither is it corruptible as expressed juices are, but is bettered by age. Being mixed with Sugar it is an excellent sauce for roast meat. It preserves also divers kinds of Fruits for many years. It makes also Raisins, and dryed Grapes to swell, so as to acquire their former magnitude again, which are good to refresh a weak Stomach in many diseases, and serves for the preparing of divers kinds of meats of Flesh and Fish; but you must mix some water with the spirit, or else the Raisins will contract too much

acidity. This spirit doth especially serve for making meats delightfully acid; for whatsoever things are prepared with it, as Chickens, Pigeons, Veale, *&c.* are of a more pleasant taste than those which are prepared with Vinegar. Beef being macerated with it, becomes in a few dayes so tender, as if it had been a long time macerated with Vinegar. Such, and many more things can the Spirit of Salt do.

A distillation of Vegetable Oyles, whereby a greater quantity is acquired, than by that common way, by a Vesica.

As many Distillers as hitherto have been, have been ignorant of a better way to distill Oyles of Spices, Woods, and Seeds, than by a vesica or alembick, with a great quantity of water. And altho' they may also be made by retort, yet there is a great deal of care required, or else they contract an *Empyreuma*; wherefore that way, by a still, is alwayes accounted the better, which way indeed is not to be slighted, if you distill Vegetables of a low price, and such as be oleaginous; but not so in the distillation of Spices, and of other things that are of a greater value, as are Cinnamon, Mace, Saffron, *&c.* which cannot be distilled in a gourd still without loss, because then there is required a great quantity of water, and by consequence great, and large vessels, to which something adheres, wherefore we lose almost half, which is not to be so much valued in vegetables that are oleaginous, as in Annisseed, Fennel, and Caryoway-seed, *&c.* But the loss made in the distilling of dryer and dearer vegetables, as of Cinnamon, *Lignum Rhodii*, *Cassia*, is evident enough, and by consequence not to be slighted. Neither can it be, that all things can be distilled that way, for a good quantity by coction acquireth a gummy

tenaciousness, which cannot ascend with the water. But that this way for the future may be prevented, I will shew another way to distill the Oyles of Spices, and other precious things, which is done with spirit of salt, whereby all the Oyle is drawn forth without any loss, the process whereof is this, *viz.* Fill a gourd with Cinnamon or any other Wood, or Seed, upon which pour so much of the spirit of salt, as will be sufficient to cover the wood, then place it with its Alembick in Sand, and give it fire by degrees that the spirit of salt may boyl, and all the Oyle will distill off with a little flegme; for the spirit of salt doth with its acrimony penetrate the wood, and freeth the Oyle that it may distill off the better and easier. And by this way the Oyle is not lost by the addition of that great quantity of water in those great and large vessels, but is drawn in lesser glass vessels with the addition of a little moysture. Distillation being finished the spirit is poured off by inclination from the wood, being again useful for the same work. And if it hath contracted any impurity from the wood, it may be rectified: but the residue of the spirit which remains in the wood ye may recover, if that wood be cast into the aforesaid furnace upon burning coals, by which means it may come forth again pure, and clear: and by this means we lose none of the spirit of Salt. And after this way by help of the spirit of Salt, are drawn forth Oyls of dearer Vegetables together with their Fruit, which cannot be done by a still.

There are made also by means thereof Oyles of Gumms and Rosins, clear, and perspicuous.

The clear Oyle of Mastick, and Frankincense.

Take of Frankincense or Mastick powdered small, as much as will serve to fill the third part of a Retort

(which must be coated) upon which pour a sufficient quantity of spirit of Salt, taking heed that the Retort be not filled too full, or else the spirit when it boyles, flows over it, then place it in sand, and give fire by degrees, and there will first come out some phlegme, after which a clear transparent oyle together with the spirit of salt, which must be kept by it self, after this a certain yellow Oyle which must be received by it self, and last of all there follows a red Oyle, which altho' it is not to be cast away, yet it is very unlike to the first, serving for outward uses, and to be mixed with Oyntments and Emplasters, for it doth wonderfully consolidate, and therefore good in new and old Wounds. The first being well rectified, is in its subtilty, and penetrating faculty not unlike to spirit of wine, and may profitably be used inwardly and outwardly, *viz.* in cold affects, but especially in the stiffness of the Nerves, caused by cold humors, upon which follows a contraction; but then you must first rub the member contracted with a linnen cloath, that it may be well warmed, into which then the Oyle must be chafed with a warm hand. For it doth do wonders in such like affects of the Nerves.

After the same manner may Oyles be made out of all gumms. The red, tenacious and stinking Oyles of Tartar, Harts-horn, Amber, &*c.* distilled after the common way by retort are also rectified with spirit of salt so as to become transparent and to lose the *Empyreuma* contracted by distillation.

Now the cause of the blackness, and fetidness of these kind of Oyles, is a certain volatile salt which is to be found as well in Vegetables, as certain Animals, which is easily mixed with the Oyle, and makes it of a brown colour. For every volatile salt whether it be of Urine, Tartar, Amber, Harts-horn, and of other

Vegetables and Animals, is of this condition and nature, as to exalt, and alter the colours of sulphureous things, and that either for the worse or for the better: but for the most part it makes Oyles thick, black and stinking, as you may see in Amber, Harts-horn, and Tartar. The cause therefore of the blackness, and fetidness of these Oyles being known we may the more easily take heed thereof in distilling, and being contracted, correct them again by the help of spirit of Salt. For all volatile salt hath contrariety to any acid spirit, and on the other side, every acid spirit hath a contrariety with all volatile salts, that have the nature of salt of Tartar. For metals that are dissolved with acid spirits are as well precipitated with spirit of Urine, or any volatile salt as with the liquor of salt of Tartar; which shall be more at large declared in the second part.

The volatile salt therefore is by the mortifying acid spirits, as of Salt, Vitriol, Allom, Vinegar, *&c.* deprived of its volatility, and is fixed, by which means being debilitated it forsakes its associate which was infected with blackness by it: it is necessary that we should proceed after the same manner with these fetid Oyles, *viz.* as follows.

Take any fetid Oyle of Tartar, Amber, *&c.* with which fill the fourth part only of a glass Retort, and upon it pour by drops the spirit of salt; and it will begin to be hot, as it is used to be, when Aqua fortis is poured on salt of Tartar; wherefore the spirit is to be poured on it by little and little, and by drops for fear of breaking the glass: Now the signe of the mortification of the volatile salt is, when it ceaseth to make a noise, and then no more is to be poured on, but set your Retort in sand, & give fire to it by degrees, as is used to be done in the rectifying things

of easie elevation: and first of all will go forth a certain stinking water, after which comes a transparent clear, and odoriferous Oyle, and after that a certain yellow, clear, and also well smelling Oyle, but not so as the first, wherefore each must be taken a part by changing the receivers. Now these Oyles become more grateful than those fetid ones of the shops. For these Oyles retain their clearness, and fairness, the cause of their fetidness, and redness being taken away by the spirit of salt. In the bottom of the Retort remains the black volatile salt with the spirit of salt, from whence it may be sublimed into an odoriferous salt resembling salt armoniack in tast. The spirit of salt is also deprived of its acidity, and coagulated by the volatile salt, and is like *tartarum vitriolatum*, appointed also for its uses, as shall be spoken in the second part, of the spirit of Urine.

After the same manner also are rectified other Oyles, which by length of time have contracted a clamminess, as are Oyle of Cinnamon, Mace, Cloves, *&c.* with the spirit of Salt, if they be rectified by Retort, for then they acquire again both the same clearness, and goodness, as they had when they were newly distilled.

Here I must make mention of a certain error of Physitians, not only of ignorant Galenists but Spagyricks, committed in the preparations of some Chymical medicaments. For many have perswaded themselves that Oyle of Tartar, Harts-horn, *&c.* having lost its stink, is a Medicine radically taking away all obstructions; but this must be taken with a grain of salt. For some have rectified these kinds of Oyles by calcined Vitriol, and by that means have somewhat made them lose their *Empyreuma*, but with all their Vertues; which others observing have

conceived that the fetidness thereof is not to be taken away, because the Vertue of them is thereby lost, as if the Vertue consisted in the fetidness thereof; but that is a very great error, because fetidness is an enemy to the heart and brain, and in it is no good. But this is granted, that they that take away the fetidness of those Oyles mortifie the vertues of them. But thou sayst, How then must we proceed in taking away their fetidness without the loss of the vertues? Must they be rectified by the spirit of salt? as even now thou taughtest. R. No, for although I said that Oyles might be clarified with spirit of salt, yet it doth not follow that my meaning was, that that clarification was the mending of them: This is only a way of clarification, whereby they become more grateful; and it is not to be slighted, a better being unknown. But how they are to be rectified from their fetidness and blackness, without the loss of their Vertues, and to be made more noble, doth not belong to this place, because it cannot be done by this Furnace: I shall refer the reader therefore to the second part, where it shall be shewed, how such spirits are to be rectified without the loss of their vertues, which being so prepared may well be accounted for the fourth Pillar of Physick. And these things I was willing at least for information sake to shew you, not to offend you, and that because I was moved with pity, and compassion towards my neighbour.

The Quintessence of all Vegetables.

Pour upon Spices, Seeds, Woods, Roots, Fruits, Flowers, &*c.* the Spirit of Wine well rectified, place them in digestion to be extracted, untill all the essence be extracted, with the Spirit of Wine; then upon this Spirit of Wine, being impregnated, pour

the best Spirit of Salt; and being thus mixed together, place them in Balneo to digest, untill the Oyle be separated, and swim above from the Spirit of Wine, then separate it with a separating glass, or distill off the Spirit of Wine in Balneo, and a clear Oyle will ascend; for if the Spirit of Wine be not abstracted, then that Oyle will be as red as blood; and it is the true quintessence of that vegetable, from whence by the Spirit of Wine it was extracted.

The Quintessence of all Metals and Minerals.

Dissolve any metal (excepting Silver, which must be dissolved in Aqua fortis) in the strongest spirit of Salt, and draw off the flegme in Balneo; to that which remains pour the best rectified spirit of Wine, put it to digesting, untill the Oyle be elevated to the top as red as blood, which is the tincture, and quintessence of that metal, being a most Precious treasure in medicine.

A sweet and red Oyle, of Metals and Minerals.

Dissolve a Metal or Mineral in spirit of Salt, dissolve also an equal weight of salt of Wine essentificated; mix these dissolutions, and distill them by retort in a gradual heat, and there will come out an oyle sweet, and as red as blood, together with the spirit of Salt; and sometimes the neck of the retort and receiver will be coloured like a Peacocks tail with divers colours, and sometimes with a golden colour.

And because I would without any difference comprehend all Metals and Minerals under one certain general process; let him that would make the essence of silver take the spirit of nitre, and proceed in all things as was spoken of the other metals. Concerning the use of these essences, I need not

speak much thereof; for to him that knows the preparation shall be discovered the use thereof. Concerning the corrosive oyles of metals and minerals, seeing they cannot be described by any one process, it will be worth while to set down what is peculiar to each of them, as followeth.

The Oyle, or Liquor of Gold.

Dissolve the calx of gold in the spirit of salt, (which must be very strong, or else it cannot dissolve it) but in defect of the strongest spirit thereof, mix a little of the purest salt-peter; but that oyle is the best which is made with the spirit of salt alone. From the gold dissolved abstract half the solution, and there will remain a corrosive oyle, upon which pour the expressed juice of lemons, and the dissolution will become green, and a few feces fall to the bottom, which may be reduced in melting. This being done, put this green liquor in Balneo, and draw off the flegme: that which remains take out, and put upon a marble in a cold moist place, and it will be resolved into a red oyle, which may safely, and without danger be taken inwardly, curing those that are hurt with Mercury. But especially it is commended in old ulcers of the mouth, tongue, and throat, arising from the French pox, leprosy, scorbute, *&c.* where the oyl of other things cannot be so safely used. There is not a better medicine in the exulceration, and swelling of the glandules, in the ulcers of tongue and jaws, which doth sooner mundify, and consolidate. Neither yet must we neglect necessary purgings, and sudorificks, for fear of a relapse, the cause not being taken away.

Neither will there any danger follow, whether it be given inwardly, or used outwardly, as in the

accustomed use of other medicaments, and gargarisms; for it may daily, and truly without all danger be used at least three times with a wonderful admiration of a quick operation.

Oyle of Mars.

Dissolve thin plates of Iron in rectified spirit of salt, take the solution, which is green, of a sweet tast, and smelling like fetid sulphur; and filter it from that filthy and feculent residence: then in a glass gourd in sand, abstract all the humidity (*viz.* with a gentle fire) which will be as insipid as rainwater, because the iron by reason of its dryness, hath attracted all the acidity to it self: but in the bottom will remain a mass as red as blood, burning the tongue like fire: it takes away all proud flesh of wounds, and that without all danger. It is to be kept in a glass close stopt from the air, lest it be resolved into an oyle, which will be of a yellow colour. But he that desires to have the oyle, may set it on a marble in a moist Cellar, and within a day it will be resolved into an oyle, which will be in colour betwixt yellow and red: It is a most excellent secret in all corroding ulcers, fistulas, cancer, *&c.* being an incomparable consolidator, and mundifyer. And it is not without profit mixed also with common water to wash the moist, fetid ulcers of the leggs; which cause tumours, by being applyed warm like a bath, for it dryes, and heals suddenly, if withal Purges be administred. It cures also any scab. That red mass (being yet unresolved) being put on the oyle of sand, or flints (of which in the second part) makes a tree to grow in the space of one or two hours, having root, trunk, and boughs: which being taken out, and dryed, in the test yields good gold, which that tree extracts from the earth, *i. e.* from the flints, or sand. Thou mayst if

thou pleasest, more accurately examine this matter.

Oyle of Venus.

Spirit of Salt doth not easily work upon Copper, unless it be first reduced into a calx, and that after this manner. Take plates of Copper made red hot in an open crucible, quench them in cold water, and they will cleave into red scales: then the remainders of the plates make red hot, and quench as before: do this so often, till thou hast got a sufficient quantity of the calx; which being dryed, and powdered, extract with the rectified spirit of salt, in sand, until the spirit of salt be sufficiently coloured with a green tincture, which you must decant, and filter; and then abstract from it the superfluous moisture, that there may remain a green thick oyle, which is an excellent remedy for ulcers, especially such as are Venereal, being applyed outwardly.

Oyle of Jupiter *and* Saturn.

Neither are these two metals easily dissolved in the spirit of salt, yet being filed, are dissolved in the best rectified spirit of salt. But the operation is performed better with the flowers of these metals (the preparation whereof shall be hereafter taught.) Take therefore the flowers, upon which in a gourd glass pour the spirit of salt, and presently the spirit will work upon them, especially being set in a warm place; filter the yellow solution, and abstract the humidity, until there remain a yellow heavy oyle, which is proper against putrid ulcers.

Oyle of Mercury.

Neither is this easily dissolved with the spirit of salt: but being sublimed with vitriol, and salt is easily

dissolved. Being dissolved, it yields an oyle very corrosive, which must be used with discretion, wherefore it is not to be administred, unless it be where none of the other are to be had. For I saw a woman suddenly killed with this oyle, being applyed by a certain Chyrurgeon. But this oyle is not to be slighted in eating ulcers, tetter, &*c.* which are mortified by it.

Oyle of Antimony.

Crude Antimony that hath never undergone the fire, is hardly dissolved in spirit of salt: as also the *Regulus* thereof; but the *Regulus* being subtilly poudered, is more easily wrought upon, in case the spirit be sufficiently rectified.

The *Vitrum* is more easily, but most easily of all the flowers are dissolved, being such as are made after our prescription a little after set down. Neither is *Butyrum Antimonii* (being made out of sublimed Mercury, and Antimony) any thing else but the *Regulus* of Antimony dissolved with spirit of salt; for sublimed Mercury being mixed with Antimony, feeling the heat of the fire, is forsaken by the corrosive spirits associating themselves with the Antimony, whence comes the thick Oyle; whilest which is done the sulphur of Antimony is joyned to the Quick-silver, and yields a Cinnabar, sticking to the neck of the Retort; but the residue of the Mercury remains in the bottom with the *Caput Mortuum*, because a little part thereof doth distill off: And if thou hast skill thou mayst recover the whole weight of the Mercury again.

And these things I was willing the rather to shew thee, because many think this is the oyle of Mercury, and therefore that white powder made thence by the

pouring on of abundance of water they call *Mercurius vitæ*, with which there is no mixture at all of Mercury, for it is meer Regulus of Antimony dissolved with spirit of Salt, which is again separated, when the water is poured on the Antimonial butter; as is seen by experience; For that white pouder being dryed, and melted in a crucible yields partly a yellow Glass, and partly also a Regulus, but no Mercury at all.

Whence it doth necessarily follow that that thick oyle is nothing else but Antimony dissolved in spirit of Salt. For the flowers of Antimony being mixed with spirit of Salt, make an oyle in all respects like to that butter which is made of Antimony, and sublimated Mercury, which also is after the same manner by the affusion of a good quantity of water precipitated into a white pouder, which is commonly called *Mercurius vitæ*: It is also by the same way turned into *Bezoardicum mineral*, viz. by abstracting the spirit of Nitre, and it is nothing else but Diaphoretick Antimony.

For it is all one whether that Diaphoretick be made with spirit of Nitre, or with Nitre it self, *viz.* corporeal, for these have the same vertues, although some are of opinion that that is to be preferred before the other; but the truth is, there is no difference. But let every one be free in his own judgment, for those things which I have wrote, I have not Writ out of ambition, but to find out the truth.

Now again to our purpose, which is to shew an oyle of Antimony made with the spirit of salt.

Take a pound of the flowers of Antimony (of which a little after) upon which pour two pound of the best rectified spirit, mix them well together in a glass,

and set them in sand a day and night to dissolve, then pour out that solution together with the flowers into a retort that is coated, which set in sand, and first give a gentle fire, untill the flegme be come off, then follows a weak spirit with a little stronger fire, for the stronger spirits remain in the bottom with the Antimony: then give a stronger fire, and there will come forth an oyle like to the butter of Antimony made with sublimed Mercury, and is appropriated to the same uses, as follows.

The flowers of Antimony, White and Vomitive.

Take of this butter as much as you please, upon which in a glass gourd, or any other large glass pour a great quantity of water until the white flowers will precipitate no more; then decant off the water from the flowers, which edulcorate with warm water, and dry with a gentle heat, and thou shalt have a white pouder.

The Dose is, that 1. 2. 3. 8. 10. grains be macerated for the space of a night in wine, which is to be drank in the morning, and it worketh upward and downward. But it is not to be given to children, those that be old, and weak, but to those that be strong, and accustomed to vomiting. When at any time this infusion is taken and doth not work, as sometimes it falls out, but makes the Patient very sick, he must provoke vomiting with his finger, or else it will not work, but make those that have taken it to be sick, and debilitated even to death. We must also in the over much working of these flowers drink a draught of warm Beer, or rather of warm Water, decocted with Chervil, or Parsly, and they will work more mildly. But let not him that is able to bear the operation thereof any way hinder it, for there is the

greater hope of recovering his health thereby, for they do excellently purge choler, and evacuate flegme in the Stomack, being humors that will not yield to other Catharticks; they open obstructions, resist the putrefaction of the blood, the causes of many diseases, such as are Feavers, Head-aches, *&c.* they are good for them that are Leprous, Scorbutical, Melancholical, Hypochondriacal, infected with the French-Pox, and in the beginning of the Plague. In brief, they do work gallantly, and do many things.

After the taking of them, the Patient must stay in his bed or at least not go forth of his house, for to avoid the aire, or otherwise they may be mistrusted.

And because of their violence they are feared, and hated, I shall in the fourth part of this Book for the sake of the sick set down such as are milder, and safer, such as shall work rather downward than upward, causing easie vomits, which also thou mayest give to children, and those that are old without danger, yet some respect being had of the disease, and age.

The flowers of Antimony diaphoretical.

The foresaid flowers if they be cast into melted Nitre, and be left a while in melting, are made fixt, so as to become Diaphoretical, and lose their Cathartical Vertue. The acid water being separated from the flowers, if it be evaporated, leaves behind the best spirit of salt, serving for the same or such like uses again.

Of the External use of the Corrosive Oyle of Antimony.

This oyle hath been long used by Chirurgions, for they have with a feather applyed it to wounds almost

uncurable, to separate impurities, for the acceleration of the cure, that afterwards other medicaments being applyed may the better operate. But it is better if it be mixed, with spirit of Salt, for they are easily mixed and it is made more mild thereby, and the too great corrosive faculty thereof is mitigated. Neither is there any other besides the spirit of Salt, with which this oyle can be mixed, unless it be the strongest spirit of Nitre, for the weak spirit of Nitre precipitates the butter of Antimony, as you may see in the preparation of *Bezoardicum Minerale*. But the strongest spirit of nitre dissolving this butter, makes a red solution of wonderfull Vertue in Chymistry, of which we are not to treat in this place; and if this be drawn off again by distillation, it leaves behind the first time a fixed Antimony, and Diaphoretical, which otherwise must be drawn off twice, or thrice, *viz.* if it be weak, and not able to dissolve the butter without precipitation.

Now this *Bezoardicum* is the best, and safest Diaphoretick in all diseases that require sweat, as in the plague, French pox, feavers, scorbute, leprosy, *&c.* if it be given from 6. 8. 10. to twenty grains in proper vehicles; it penetrates the whole body, and evacuates all evil humours by sweat and urine.

The Oyl of Arsenic *and* Auripigmentum.

As the spirit of salt doth not easily work upon Antimony by reason of the abundance of crude sulphur, unless it be reduced into flowers, in the preparation whereof, some part of its sulphur is burnt; so also *Arsenic* and *Auripigmentum* are hardly dissolved with spirit of salt, unless they be reduced into flowers, and the spirit of salt be very strong, which may be able to work upon it. These may be

distilled by retort like Antimony into a thick heavy oyl; which being used in cancrous eating ulcers, exceeds that of Antimony in mortifying, mundifying, and purging those evils. After the same manner may corrosive oyls be made out of all the realgars being ordained for outward uses.

Oyl of Lapis Calaminaris.

Take of the best yellow or red *Lapis Calaminaris* very subtilly powdered, as much as you please, and pour upon it five or six times as much of rectified spirit of salt, mix and stir them well together, and do not leave them long unstirred, but ever and anon shake the glass with the materials; and this do oftentimes, or else the *Lapis Calaminaris* will grow together into a very hard stone, which can be dissolved no more, and is prevented by the aforesaid often shaking: and when the spirit of salt will dissolve no more thereof in *frigido*, set the glass in warm sand so long, until the spirit be tinged with a most yellow colour, which then decant, and pour on fresh, and again set it in digestion to extract, and do not forget to shake the glass often. The solution being finished filter it, and cast away the residue of the *terra mortua*. Afterwards set the solution in sand, and give fire, and almost three parts of the spirit of salt will go over insipid, which is nothing but the flegme, although the spirit was never so well rectified; the reason whereof is the most dry nature of *lapis calaminaris*, to which the spirit of salt is very friendly, and therefore very hard to be separated from it. For I never knew any mineral or metal (beside *Zinck*) which exceeds *lapis calaminaris* in dryness. At last when no more flegm will go over, let all things cool; which being done, take out the glass, and thou shalt find a red thick oyl, as fat as oyl olive, and not very corrosive; for that

spirit of salt being almost mortified with the *lapis calaminaris* is deprived of its acidity. This oyl is to be kept from the air; or else within a few dayes it attracts much air which it converts into water, and thereby becomes weakened.

This Oyl is of wonderful Vertue, being used as well inwardly as outwardly. And I wonder that in so long a time there hath been no body, who hath operated in *lapis calaminaris* and described the nature thereof, seeing it hath in it a golden sulphur (of which thing in the fourth Part) for if the terrestreity thereof were separated from it artificially, pure gold would be manifested therein; now the greatest part thereof is volatile, and immature, and cannot easily be reduced into a body in melting, wherefore hitherto that stone hath not been esteemed of by Chymists, but to the wise was alwayes pretious, *&c.*

The use of the Oyl of Lapis Calaminaris.

If it be given from 1. 2. 3. drops to ten, and fifteen with sutable vehicles, it purgeth the dropsy, leprosy, gout, and other noxious fixed humors not yielding to vegetable Catharticks, of which more at large in the second Part of the spirit of urine and salt of tartar. It serves outwardly for an excellent vulnerary balsome, the like to which can scarce be shewed, not only in reducing old corrupt wounds, but also in those that are green, for it doth powerfully dry, mundify, and consolidate.

It is also used in houshold affairs, for birdlime being dissolved in it, yields a certain tenacious matter serving to catch birds, mice, *&c.* about the house or in the field. For it is as permanent in the heat of the Sun, as in the cold of Winter, wherefore it may be used at any time of the year; all small

animals stick to it if they do but touch the matter.

A ligature or string smeered therewith, and bound about any tree prevents the spiders from climbing up thereon, and other kinds of insects that are noxious to the fruit; a thing worth taking notice of.

This oyl is not by the pouring on of water corrupted, neither is it precipitated, as that of Antimony: wherefore it is useful for many things. Common yellow sulphur boyled in it, *viz.* in a strong fire, so as to be dissolved in it, swims upon it like fat, is thereby purified and made as transparent as yellow pellucid glass, and a better medicine than those common flowers of sulphur: it serves also for other uses, all which to relate here it would be too tedious.

This oyl being mixed with clean sand, and distilled by retort in a fire that is very strong (otherwise the spirit of salt will not leave the *lapis calaminaris*) yields a most fiery spirit, the *lapis calaminaris* remaining in the bottom of the retort.

This spirit is so strong, that it can scarce be kept; it dissolves all metals, and all minerals (excepting silver and sulphur) wherefore by the help thereof many excellent medicaments are made, which cannot be made with the common spirit though never so well rectified, which although it be often rectified, yet it is not without flegm, which cannot be separated from it by the power of rectification, so well as with *lapis calaminaris*.

This spirit doth perform many things in medicine, & alchymy, as also in other arts, as you may easily conjecture; but here is not opportunity to speak more of these things, yet for the sake of the sick I shall add one thing, to which few things are to be compared;

the plain & short process whereof I would not have thee be offended at. And it is this, *viz.* mix this spirit with the best rectifyed spirit of wine, digest this mixture some while, and the spirit of salt will separate the spirit of wine, and will make the oyl of wine swim on the top, the volatile salt being mortified: and this oyl is a most incomparable cordial, especially if with the said spirit of wine, spices have first been extracted, and with the said spirit of salt, gold hath been dissolved. For then in the digestion of this mixture, the oyl of wine being separated, attracts the essence of the cordial species, and of other vegetables, being extracted before with the spirit of wine, as also the tincture of gold, and so by consequence a most efficacious incomparable and universal medicine for all diseases, fortifying the *Humidum radicale*, that it may be able to overcome its enemies; for which let praise and glory be given to the immortal God for ever who hath revealed to us so great secrets.

Of the Extrinsecal use of the spirit of Salt in the Kitchen.

I said before that instead of Vinegar, and verjuice it may be used, as also instead of the juice of Limons, now it remains that I shew you how it is to be used, and that indeed as well for the sake of the healthy as the sick.

Let him therefore that will dress a pullet, pigeons, veal, *&c.* in the first place put a sufficient quantity of spices, of water, and butter, and then as he pleaseth a greater, or lesser quantity of spirit of salt: and by this means fleshes are sooner made ready being boyled, then that common way; an old hen though the flesh thereof be old is made as tender as a chicken by the addition of this spirit: but he that will

use it instead of the juice of Limons with rost meat, must put into it the pill of Limons for preservation sake, because it preserves it. It is used instead of verjuice by it self alone, or mixed with a little sugar, if it be too acid.

He that will stew beef, and make it as tender as kid, must first dissolve in it tartar and a little salt before he wets the flesh therewith, and the flesh will not only be preserved but made tender thereby: but to keep flesh a long time you must mix some water therewith, and with weights press down the flesh, that it may be covered with the pickle: for by this means flesh may be preserved a great while.

After the same manner may all kinds of garden fruits be preserved, as cucumbers, purslain, fennel, broom, German capers, *&c.* and indeed better than in vinegar. Also flowers, and hearbs may a long while be preserved by the help thereof, so that you may have a rose all the winter.

It preserves also wine, if a little be mixed therewith. A little thereof being mixed with milk precipitates the cheese, which if it be rightly made is never corrupted, being like to such cheese as they call *Parmesan*. The whey of that milk dissolves Iron, and cures any scab being washed therewith.

With the help of spirit of salt is made with honey, and sugar a most pleasant drink, not unlike to wine. There is made also of certain fruits with the spirit of salt a very good vinegar like to the Rhenish vinegar. Such and many more things, which I will not now divulge, may be done with spirit of salt.

And thus have I in some measure taught the use of the spirit of salt, which I would not have you take as if I had revealed all things; for, brevities sake, as also

for some other reasons I have silently passed over many things. Neither do I know all things my self: but those things, which I do know, I have so far declared that others may from thence have hints of seeking further. He that would describe all, and every power and vertue thereof, had need to write a whole volum, the which is not my purpose at this time to do, but may perhaps be done another time. There shall also be shewed in the second part of this book, some secrets which may be prepared by the help of this spirit: as how it may be dulcified to extract the tincture of gold, and of other metals, leaving a white body, which tincture is a medicine not to be slighted. Wherefore now seeing it is manifest how great things this spirit can do, every one will desire a good quantity for his houshold uses, especially seeing most excellent spirits may be made after an easie and short way.

How an acid spirit, or vinegar may be distilled out of all vegetables, as hearbs, woods, roots, seeds, &c.

First put a few living coals into the furnace, then put upon them the wood that is to be distilled, that it may be burnt: out of which whilst it is burning goes forth the acid spirit thereof into the receiver, where being condensed it falls down into another receiver, resembling almost common vinegar in its smell, wherefore also it is called the *vinegar of woods*.

And after this manner you may draw forth an acid spirit out of any wood, or vegetable, and that in a great quantity without costs, because the wood to be distilled is put but upon a very few living coals, and upon that another, for one kindles the other; and this spirit requires no more charges than of the wood to be distilled; which is a great difference betwixt this,

and the common way of distilling, where besides retorts, is required another fire; and out of a great retort scarce a pound of spirit is drawn in the space of five or six hours; whereas in ours in the space of one day, and that without any cost or labor may be extracted twenty or thirty pound, because the wood is immediately to be cast into the fire to be distilled, and that not in pieces, but whole. Now this spirit (being rectified) may commodiously be used in divers Chymical operations, for it doth easily dissolve animal stones, as the eyes of Crabs, the stones of Perches, and Carps, Corals also and Pearl, *&c.* as doth vinegar of wine. By means thereof also are dissolved the glasses of metals, as of tin, lead, Antimony, and are extracted, and reduced into sweet oyles.

This vinegar being taken inwardly of it self doth cause sweat wonderfully, wherefore it is good in many diseases, especially that which is made of Oak, Box; Guaiacum, Juniper, and other heavy woods; for by how much the heavier the woods are, by so much the more acid spirit do they yield.

Being used outwardly it mundifies ulcers, wounds, consolidates, extinguisheth, and mitigates inflammations caused by fire, cures the scab, but especially the decoction being made of its own wood in the same. Being mixed with warm water for a bath for the lower part of the body, it cures occult diseases of women; as also malignant ulcers of the leggs.

This spirit therefore deserves some place in the shops, *i. e.* it is unjustly rejected in the shops, seeing it is easie to be made. In distilling of wormwood and other vegetables, there remaines in the bottom of the furnace ashes, which being extracted with warm

water yields a salt by decoction, which being again dissolved in its own spirit or vinegar, and filtred, doth by the evaporation of the flegm, being placed in a cold place pass into a Crystalline salt, which is of a pleasant tast, not like unto a *lixivium*, nor unto other salts that are dissolved in the air. This salt is also more efficacious (being reduced into Crystals by its proper Spirit) than that which is made by the help of sulphur, or Aqua fortis, and oyl of Vitriol, and otherways which Chymists, and Apothecaries use.

The spirit of paper and linnen cloath.

Pieces of linnen cloth gathered, and got from Sempsters being cast into the furnace upon living coals, yield a most acid spirit, which tingeth the nailes, skin, & hair with a yellow colour, restores members destroyed with cold, is good in a gangrene, and erysipelas if linen clothes wet in the same be applyed thereto, *&c.* The same doth spirit made of paper, *viz.* of the pieces thereof.

The spirit of silk.

After the same manner is there a spirit made of pieces of silk, which is not so sharp as that which is made of linnen and paper, neither doth it tinge the Skin, but is most excellent in wounds as well old as green, and it makes the Skin beautiful.

The spirit of mans hair, and of other animals, as also of horns.

Out of horns also, and hair is made a spirit, but most fetid, wherefore it is not so useful, although otherwise it may serve for divers arts: being rectified it comes clear and to be of the odour of the spirit of

urine. It dissolves common sulphur, and yields a water, that cures the scab in a very short time.

Now for this business, shreds of woollen cloth undyed may serve, being cast in a good quantity into the furnace. Pieces of cloath dipt in this spirit and hanged in vineyards, and fields, keep out Deer and Swine from coming in, because they are afraid of the smell of that spirit, as of an huntsman that waits to catch them.

The spirit of vinegar, honey, and sugar.

He that will distil liquid things, must cast red hot coals into them, as for example into vinegar in the furnace, or if it be honey, or sugar, let them first be dissolved in water, by which means they will be drank up by the coals, which being therewith impregnated, must afterwards at several times be cast into the furnace, and be burnt; and whilst the coals are burning, that which is incombustible comes forth. And by this means you may distil liquid things in a great quantity.

Vinegar which is distilled this way, is of the same nature, as that which is distilled in close vessels.

But honey and sugar that are distilled after this manner, are a little altered, and acquire other vertues: but how they shall be distilled without the loss of their volatile spirit shall be taught in the second Part. Also after this manner may all liquid things being drunk up by living coals be distilled.

Of the use of distilled vinegar many things might be said, but because the Books of all the Chymists treat abundantly thereof, I account it needless to repeat what they have writ. Yet this is worth taking notice of, that the sharpest vinegar hath a great

affinity with some metals, which may be extracted by the help thereof; also dissolved, and reduced into medicaments; yea, many things may be made with the help thereof, as the books of all the Chymists testify.

But there is yet another vinegar, of which there is often mention made in the books of Philosophers, by the help whereof, many wonderful things are performed in the solution of metals, the name whereof the ancients have been silent in; of which I do not here treat, because it cannot be made by this furnace; but I shall treat of it in another part; yet so that I incur not the Curse of the Philosophers.

How spirits may be made out of the salt of tartar, vitriolated tartar, the spirit of salt tartarizated, and of other such like fixed salts.

As many Chymists as there hath been, almost all have been of the opinion that a spirit cannot be drawn out of salt of tartar, and other fixed salts. For experience hath taught that by retort little or no spirit can be drawn from thence, as I had often experience of before the invention of this furnace: the reason of which thing was the admixtion of sand, earth, bole, pouder of tiles, *&c.* for to prevent the flowing of the salt of tartar, being by this means dispersed. But this is done through the ignorance of Authors, who have been ignorant of the properties of salt of tartar. For a stony matter, as sand, flint, bole, *&c.* being mixed with salt of tartar, feeling the heat of the fire, and being made red with the same, is joyned to it most closely, so as no spirit can be drawn from thence, but become a most hard stone. For sand, and such things that are like to it, have so great an affinity with the salt of tartar, that being once united can scarce ever

be separated. Yet it may be made by Art by the addition of pure sand, or flint, because the whole substance of the salt of tartar may be turned into a spirit in the space of one or two hours, as shall be taught in the second part, and it excells all other medicaments in vertue, in curing the stone, and gout. And if by the regiment of art there be left any *Caput Mortuum* in the distillation, it hath, being dissolved in the air, a power to putrify metals being prepared, and mixed with it, in the space of few hours, so as to make them become black, and to grow up like trees with their roots, trunks, and boughs, which by how much the longer they are so left, become the better. Of calx of lead being subtilized, and of salt of tartar may be made a *spiritus gradatorius* of wonderful vertues as well in Medicine as Alchymy. There is made of the *Caput Mortuum, per deliquium* a green liquor which doth wonderful things; whence it is proved, *That Saturn is not the lowest of the Planets*; enough to the wise.

And so is the Lac Virginis, and the Philosophical Sanguis Draconis made.

Sometimes there is found a certain earth, or bole, which hath no affinity with tartar, which being mixed with salt of tartar yields a spirit, but very little. But in this furnace may all fixed things be elevated, because the species not being included in it, but dispersed, being cast upon the fire, are from the fire elevated through the aire, and are being refrigerated in the recipients again condensed, which cannot be so well done by a close retort.

He therefore that will make the spirit of the salt of tartar, need do nothing else than to call the calcined tartar into the fire, and it will wholly come over in a

spirit: but then there are required glass recipients, because those that are earthen cannot retain it.

And this is the way whereby most fixed salts are distilled into a spirit by the first furnace. In the second furnace (*viz.* in the furnace of the second Part) it may be done better, and easier, where together with the preparation shall be taught the use thereof.

The spirits, flowers, and salts of Minerals and stones.

By this way spirits may be raised from any mineral or stone, and that without the addition of any other thing: yet so as that the minerals, and stones, as flints, Crystal, talk, *lapis calaminaris*, Marcasite, Antimony, being ground be with an Iron ladle cast upon the coals, and there will arise together with a certain acid spirit, some salt and flowers, which are to be washed off from the recipients, and filtred, and the flowers will remain in *Charta bibula*, or filter for the water together with the spirit, and the salt passeth through the filter, all which may be separated, rectified and be kept by themselves for their proper uses. Now this you must know, that you must choose such minerals which have not been touched by the fire, if you desire to have their spirit.

How minerals, and metals may be reduced into flowers, and of their vertues.

Hitherto the flowers of metals, and minerals have not been in use, excepting the flowers of Antimony, and sulphur, which are easily sublimed: for Chymists have not dared to attempt the sublimation of other metals, and fixed minerals, being content with the solution of them with Aqua fortis, and corrosive

waters, precipitating them with the liquor of salt of tartar, and afterward edulcorating, and drying them; and being so prepared they have called them their Flowers: but by Flowers I understand the same matter which is by the help of fire without the addition of any other thing sublimed, and turned into a most subtile pouder, not to be perceived by the teeth or eyes, which indeed is (in my judgment) to be accounted for the true flowers; when as the flowers which others make are more corporeal, and cannot be so well edulcorated, but retain some saltness in them, as may be perceived by the increase of their weight, and therefore hurtful to the eyes, and other parts.

But our flowers being by the force of the fire sublimed by themselves, are not only without saltness, but are also so subtile that being taken inwardly presently operate, and put forth their powers, *viz.* according to the pleasure of the Physitian. Neither is their preparation so costly as the others.

Metals also, and minerals are maturated, and amended in their sublimation, that they may be the more safely taken; but in other preparations they are rather destroyed, and corrupted, as experience witnesseth: Now how these kind of flowers are to be made I shall now teach, and indeed of each metal by it self, whereby the artist in the preparation cannot erre, and first thus.

Of Gold and Silver.

Gold and silver can hardly be brought into flowers, because many are of opinion, that nothing comes from them in the fire, especially from Gold, although it should be left there for ever: which although it be

true, *viz.* that nothing comes from gold in the fire, although it should remain there a long time, and from silver but a little except it have copper or any other metal mixed, which yet vapours away but by little and little.

Which I say although it be so, yet they being broken and subtilized and scattered upon coals, and so dispersed, may by the force of the fire and help of the air be sublimed, and reduced into flowers.

Now seeing the aforesaid metals are dear, and of a great price, and the furnace with its recipients large, I would not that any one should cast them in, especially gold, because he cannot recover them all; but I shall to those that desire to make these flowers shew another way in the second part, whereby they may make them without the loss of the metal; to which I refer the reader. For this furnace serves for the subliming of metals, and minerals, which are not so pretious, the loosing of part whereof is not so much regarded. And thus much is said to shew that gold, and silver, although fixed, may be sublimed. Now other metals may more easily be sublimed, yet one more easily than another, neither need they any other preparation but beating small, before they be cast into the fire.

Flowers of Iron and Copper.

Take of the filings of Iron or Copper, as much as you please, cast them with an Iron laddle upon burning coals, *viz.* scatteringly, and there will arise from Iron a red vapour, but from Copper a green, and will be sublimed into the sublimatory vessels. As the fire abates it must be renewed with fresh coales, and the casting in of these filings be continued, until you have got a sufficient quantity of flowers, and then

you may let all cool. This being done take off the sublimatory vessels, take out the flowers, and keep them, for they are very good if they be mixed with unguents, and emplasters: and being used inwardly cause vomiting; therefore they are better in Chirurgery, where scarce any thing is to be compared to them. Copper being dissolved in spirit of salt, and precipitated with oyl of vitriol, edulcorated, dryed, and sublimed, yields flowers, which being in the air resolved into a green balsom, is most useful in wounds and old putrid ulcers, and is a most pretious treasure.

Flowers of Lead and Tin.

You need not reduce these metals into small crums, it is sufficient if they be cast in piece by piece, but then you must under the grate put an earthen platter glazed, and filled with water, to gather that which flows down melted, which is to be taken out, and cast again into the fire, and this so often until all the metal be turned into flowers, which afterwards are again, the vessels being cold, to be taken out, as hath been said of the flowers of *Mars* and *Venus*. And these flowers are most excellent being mixed with plaisters and oyntments in old and green wounds, for they have a greater power to dry, than metals calcined, as experience can testifie.

Of Mercury.

This is easily reduced into flowers, because it is very volatile, but not for the aforesaid reason, because it leapes in the fire, and seeks to descend. And if you desire to have the flowers thereof, mix in first with sulphur that you may pulverize it, and cast it in mortified. And if you cast into a red hot crucible set

in the furnace, a little quick Mercury, *viz.* by times with a ladle, presently it will fly out, and some part thereof will be resolved into an acid water, which is to be preferred before the flowers in my judgment; but the rest of the Mercury drops into the receiver. But here are required glass vessels, because the aforesaid water is lost in earthen. And this water without doubt doth something in Alchymy: It is also good being applyed outwardly, in the scab, and venereal ulcers.

The flowers of Zinck.

It is a wonderful metal, and is found in the spagyrical anatomy to be meer sulphur, golden, and immature. Being put upon burning coals doth suddenly fly away wholly; it is inflamed also, and partly burns like common sulphur, with a flame of another colour, *viz.* golden purple: and yields most gallant white, and light flowers.

The use.

Being given from 4, 5, 6, grains to 12, they provoke sweat wonderfully, and sometimes vomit, and stools, according to the offending matter. The vertues thereof being externally used are also wonderful, for there are not found better flowers, for they do not only speedily consolidate fresh wounds, but also old, such as always drop water, in which cases they excell all other medicaments. For they are of such dryness, which hath joyned with it a consolidating vertue, as that they do even things incredible. They may be used divers ways, as to be strewed by themselves, putting over them a stiptick plaister, or being brought into an unguent with honey to be put into wounds; which unguents in deep wounds may be

boyled to a hardness for the making of small suppositories, which are to be put into the wounds, which must afterwards be covered with some plaister, and preserved from the air. Being applyed after this manner they cure fundamentally, being mixed with plaisters also they do wonderful things.

If they be mixed with rose, or rain water, so as to be united together, and afterwards some of this mixture be sometimes every day dropt into red eyes that water, yielding not to other ophthalmicks, do restore, and heal them.

These flowers being taken up in lint and strewed upon those places of Children that are galled with their urin (those places being first washed with water) heal them quickly. They heal also quickly any excoriation which is contracted by lying long in any sickness, and is very painful, if they be strewed thereon.

These flowers also are more easily dissolved in corrosive waters, than other metals, and minerals, neither doth the spirit leave them in the fire, but an insipid phlegm only distills off, leaving a fat and thick oyl, as is above said concerning the *lapis calaminaris*, being ordained for the same uses, but more efficacious then that. Which spirit if it be by the violence of fire driven forth, is of so great strength, that it can scarce be kept. And not only spirit of salt, but also Aqua fortis, and Regia may after this manner be exalted, so as to be able to do wonderful things in the separation of metals; but here is not place for these things, they shall be spoken of in the fourth part.

But you need not make flowers for this work, because crude Zinck doth the same, although the flowers do it something better: whence it appears

that a metal contracts a higher degree of dryness in sublimation.

Flowers of Antimony.

There is no difficulty to make the flowers of Antimony, for Chymists have a long time made use of them, and because their preparation was tedious, they were not sold at a low rate.

Wherefore there was no body willing to attempt any thing else in them, because they were used only for vomiting; the dose whereof was from 1. 2. 3. 4. grains to 8. and 10. in affects of the stomack and of the head, as also in feavers, plague, morbus gallicus, *&c.* Neither is it a wonder if Chymists tryed no farther in them, for we see that there are found men in these days who perswade themselves that there is nothing which was not found out by the learned ancients, can be found out in these days, and if there were any thing to be yet found out it was found out already by them. But this opinion truly is very foolish, as if God gave all things to the ancients, and reserved nothing for them that should come after. Neither indeed do they understand nature in their operations, which works incessantly, and is not wearied in her labours, *&c.* But however it is manifest that God hath revealed things in these times which were hid from them of old, and he will not cease to do the same even to the end of the world.

But to return to our purpose again, which is to shew an easier way of making the flowers of Antimony, whereby a greater quantity may be had, as also that they may serve for other uses.

Take of crude Antimony poudered as much as you please, and first make your furnace red hot, then cast

in at once a pound of Antimony, or thereabouts, *viz.* scatteringly upon the coals; and presently it will flow, & being mixed with the coals by the force of the fire will be sublimed through the air into the receivers like a cloud, which will there be coagulated into white flowers. Note, that when the first coals are burnt up, more must be put in to continue the sublimation, and those must be first kindled before they are put in, lest the flowers be by the dust of the coals arising together with them discoloured, and contract thence a gray colour: but it matters not if you will not use them by themselves to provoke vomiting, because there is no danger thereby, for that colour comes only from the smoake of the coals, wherefore you need not be afraid of them. But let him that dislikes this colour, first kindle the coals before he put them into the furnace, and then he shall have white flowers. Also you must not shut the middle hole through which the coals, and Antimony are cast in, that thereby the fire may burn the more freely: for else the flowers of the superior pots will be yellow and red, by reason of the sulphur of the Antimony, which is sublimed higher than the regulus. Now you may by this way make a pound of the flowers with 3. 4. or 5. pound of coals. It is a little that goes away from the Antimony, *viz.* the combustible sulphur, which is burnt, all the rest going into flowers. You must have a care to provide a sufficient quantity of subliming pots by reason that a large space is required for the sublimation of the flowers.

The flowers that are prepared after this way, are sold at a lower rate, so that one pound thereof is cheaper, than half an ounce of those that are made after the other manner. Also they are safer, as being

made with an open free flame of the fire, for they do not provoke vomit so vehemently; moreover the flowers of the lower pots are not vomiting, but diaphoretical, as if they had been prepared with nitre, for thus they are corrected by the fire: And by this way at one and the same operation divers flowers of divers operations may be made, for the flowers of the lower pots are diaphoretical, of the middle a little vomitive, but of the uppermost vehemently vomitive. For by how much the more they have endured the fire, by so much the better are they corrected; from whence the diversity of their power proceeds. Wherefore each of them are to be kept by themselves, and the uppermost for plaisters or butter, or oyl, and those to be made sweet or corrosive thereby; The middle for purging, and vomiting, but the lowermost for sweat, being more excellent than *Bezoardicum Minerale*, or *Antimonium Diaphoreticum* made with nitre. Truly I do not believe that there is an easier way of making vomiting, and diaphoretical flowers, than ours. Now for the use of them, you must know that those that are vomitive are to be administred to those that are strong, and accustomed to vomit: but to Children, and old Men with discretion, as hath been said above of the butter of Antimony: but those that are diaphoretical may be given without danger to Old and Young, to those that are in health, and to the sick; in any affliction that requires sweat; as in the Plague, Morbus Gallicus, Scorbute, Leprosy, Feavers, *&c.* The Dose of them is from 3, 6, 9, 12, grains to 24. with proper vehicles to sweat in the bed; for they do expel as well by sweat, as by urine, all evil humours. And because they that are vomitive are in a greater quantity than those that are diaphoretical, and not so necessary as these, and there may be many more doses out of them; it is

necessary to shew you how those that are vomitive may be turned into diaphoretical; and that may be done three wayes; the two former whereof I have before shewed concerning the butter of Antimony made of flowers with spirit of salt, the third is this, *viz.* put the flowers in a crucible covered, (without luting) lest any thing fall into it, so set them by themselves in a gentle fire, that they melt not, but be made only darkly glow for the space of some hours; then let them cool, for they are become fixed and diaphoretical. Although they had before contracted some yellowness or ash-colour, yet by this means they are made white, fixed, and diaphoretical. Also these flowers are used in stiptick plaisters by reason of their dry nature, with which they are endued.

Also they are melted into a yellow transparent glass, neither is there taught an easier way of reducing Antimony by it self into a yellow transparent glass, where crude Antimony is first sublimed, and being sublimed is melted into glass.

This sublimation serves instead of calcination, by the help whereof 20 pound are more easily sublimed, than by the help of the other one pound is brought into calx.

Neither is there here any danger of the ascending fumes, because when the Antimony is cast into the fire you may be gone, which is a safe, and easy calcination, whereas the common way requires the continual presence of the artist stirring the matter, who also takes out the matter when it is once grown together, and grinds it again; by which means he hath much to do, before the matter come to a whiteness; but by our way, the matter is at the first time made sufficiently white, and more than by that common way of calcination and agitation. I suppose

therefore that I have shewed to him that will make glass of Antimony, the best, and hitherto unknown way; which being taught, I hope there is no man will hereafter like a fool go that tedious way of the Antients, but rather follow my steps. For by this way may any Physitian, most easily be able to prepare for himself vomitive and diaphoretical flowers, and also glass of Antimony *per se*.

Of those Flowers may be made oyls both sweet and corrosive, and other medicaments, as hath been above said of the spirit of salt, and shall afterwards be spoken in the Second Part.

Let him that will make Flowers of the Regulus, fairer than those which are made of crude Antimony, cast it being poudered into the fire, and in all things proceed as hath been said, and he shall have them, *&c.* for they are easily sublimed. Now, how the regulus is to be made after a compendious manner, you shall find in the Fourth Part. The scoriæ also are sublimed, so as nothing is lost. But he that will make Flowers that shall be dissolved in the aire into a liquor must add some calcined tartar, or some other fixt vegetable salt, and he shall have Flowers that will be dissolved in any liquor: but he that will make red Flowers as well those that are diaphoretical, as those that are purging, must mix iron, and he shall have Flowers like to Cinnabar: Let him that desires green, mix copper, if purple, *lapis calaminaris*.

And thus out of any mineral may be made Flowers whether it be fixed, or volatile; for it is forced to fly on high being cast into the fire. And these may be used diversly in Chyrurgery, in plaisters and unguents; for they dry, and astring potently, especially those that are made of *lapis calaminaris*. Neither are they to be slighted that are made of the

golden, and silver marcasite. Those that are made of arsenic & auripigmentum, are poysonous, but are useful for Painters. Arsenic & auripigmentum being calcined with nitre, and then sublimed, yield Flowers that are safely to be taken inwardly, expelling all poysons by sweat and stool: For they are corrected two wayes, *viz.* first by the nitre, secondly by the fire in the subliming: they are not therefore to be feared, because that Arsnick was poysonous before the preparation thereof. For by how much the greater poyson it was before preparation, so much the greater medicine afterwards.

The Flowers of sulphur are taught in the Second Part, although they may also be made by this furnace, *viz.* the natures and properties thereof being known by an expert Artist, or otherwise it is burnt.

So also stones being prepared are brought into Flowers, and many other things, of which we need not say any thing, only let him that pleaseth make tryal thereof.

And now I suppose I have made plain, and shewed you clearly how distillation is to be made in this our first furnace; wherefore I will now end. He therefore that understands and knows the fabrick of the furnace (which he may understand by the delineation thereof) and the use thereof, will not deny but that I have done a good work, and will not disapprove of my labour.

And this is the best way of distilling, and subliming incombustible things. In the Second Part you shall find another furnace in which are distilled combustible things, as also most subtil spirits, *&c.* The first furnace serves also for other uses, as the separation of metals; of the pure from the impure; for the making of the central salt, and of the

humidum radicale of them all. But because it cannot be done after the aforesaid way, by which things are cast into the fire to get their flowers, and spirits, but after a certain secret Philosophical manner, by the power of a certain secret fire, hitherto concealed by the Philosophers (neither shall I prostrate that secret before all); It is sufficient that I have given a hint of it for further enquiry, and have shewed the way to other things.

FINIS.

THE SECOND PART OF Philosophical Furnaces:

Wherein is Described the Nature of the Second Furnace; by the help whereof, all volatile, subtle, and combustible things may he distilled; whether they be Vegetables, Animals, or Minerals, and that after an unknown and very compendious Way; whereby nothing is lost, but even the most subtle spirits may be caught and preserved, which else without the means of this Furnace is impossible to be done by Retorts or other Distilling Instruments.

Of the Structure of the Second Furnace.

The Distilling Vessel must be made of Iron, or good earth, such as can abide in the fire (whereof in the fifth Part of this Book it shall be taught) and you may make it as big or as little as you please,

according as your occasion shall require. That of iron is most fit to be used for such spirits, as are not very sharp or corroding, else they would corrode the vessel: but that of earth may be used for such things, as shew their activity upon the Iron, and do make it to melt, as sulphur, Antimony and the like; and therefore you ought to have two such vessels, *viz.* one of iron, and one of earth, to the end that for both sorts of materials (corrosive or not corrosive) you may have proper vessels, and fit furnaces for their distilling, and that they may not be spoiled by things contrary and hurtful to them. The shape of the vessel is shewed by the foregoing figure, *viz.* the lower part of it somewhat wider than the upper part, and twice as high as wide; at the top having a hollow space between the two edges or brims, whereinto the edge of the lid may close and enter in an inch deep. The lid must have a ring or handle, by which it may be taken off and put on again with a pair of tongs. The lid must have a deep edge answering to the hollow space aforesaid. The lower part must have three knobs or shoulders thereby to rest upon the wall of the furnace; the form whereof is no other, than that of a common distilling furnace with a sand Copple; as the figure of it doth shew: but if you will not have the furnace, then it needeth no knobs or shoulders, if so be the distilling vessel be flat at the bottom, or else have legs, for to stand upon them: Beneath the edge of the vessel there comes forth a spout or pipe of a span in length, and one or two inches wide, and somewhat narrower before than behind, through which the spirits are conveyed into the Receiver.

See the fourth Figure before the first part, wherein the Letter *A.* represents the Furnace, with the Iron distilling Vessel fastned into it, whereunto a Receiver

is applied.

B. The Distiller, with his left hand taking off the lid, and with his right hand casting in his prepared matter.

C. The external form of the distilling vessel.

D. The internal form of the vessel.

E. Another distilling vessel, which is not fastned to a furnace, but only standeth upon Coals.

The way or manner to perform the Distillation.

When you intend to distil, then first make a fire in the Furnace, that the distilling vessel come to be very hot. But if it be not fastned to the Furnace, then set it upon a grate, and lay stones about it, and coals between, and so let it grow hot, and lay melted lead in the space between the two edges or brims, to the end, that the lid, when it is put on, may close exactly, so that no spirit can get through. This done, take a little of the matter you intend to distil, and cast it in, and presently put on the lid, and there will be no other passage left but through the pipe, to which there must be applyed and luted a very big receiver. As soon as the species cast in come to be warm, they let go their spirit, which doth come forth into the receiver: and because there was but little of the matter cast in, it hath no power to force through the lute, or to break the receiver, but must settle it self. This done, cast in a little more of your matter, cover it and let it go till the spirit be settled: continue this proceeding so long, until you have spirits enough: but take heed, that you cast in no more at once, than the receiver is able to bear, else it will break. And when your vessel is full, the distillation not being ended, then take off the lid, and

with an iron ladle take out the Caput Mortuum; and so begin again to cast in, and still but a little at a time, and continue this as long as you please.

Thus in one day you may distil more in a small vessel, than otherways you could do in a great retort; and you need not fear the least loss of the subtile spirit, nor the breaking of the receiver by the abundance of the spirits: and you may cease or leave off your distilling, and begin it again when you list: also the fire cannot be made too strong, so that it might cause any hurt or damage; but by this way you may make the most subtile spirits, which is impossible to be done by any Retort. But if you will distil a subtil spirit by a Retort, as of Tartar, Harts-horn, Salarmoniack, or the like, you cannot do it without prejudice (though there were but half a pound of the matter in it) the subtlest spirits coming forth with force, seek to penetrate through the lute, if that be not good, but if that be good, so that the spirits cannot pass through it, then they break the receiver, because it cannot possibly hold such a quantity of subtle spirits at once. For when they are coming, they come so plentifully, and with such a force, that the receiver cannot contain them, and so of necessity must flye asunder, or must pass through the lutum; All which is not to be feared here, because there is but a little cast in at once, which cannot yield such a quantity of spirits, as to force the receiver to break: And when there comes forth no more spirits, and the former is settled, then more of the matter is to be cast in; and this is to be continued so long, until you have spirits enough. Afterward take off the receiver, and put the spirit into such a Glass (as in the fifth part of this book, amongst the Manuals, shall be discovered) wherein it may be kept safely without wasting or evaporating.

In this manner all things, Vegetable, Animal, or Mineral, may be distilled in this Furnace, and much better, than by means of a Retort: especially such subtile spirits (as by the other way of distilling cannot be saved, but pass through the lutum) are got by this our way; and they are much better than those heavy oyles, which commonly are taken for spirits, but are none, being only corrosive waters. For the nature and condition of a spirit is to be volatile, penetrating and subtile, and such are not those spirits of salt, Vitriol, Allome and Nitre, which are used in Apothecary shops, they being but heavy oyles, which even in a warm place do not evaporate or exhale.

But a true spirit, fit for Medicinal use, must rise or ascend before the phlegm, and not after; for whatsoever is heavier than phlegm, is no volatile spirit, but a heavy spirit or (rather called) a sowre heavy oyl. And it is seen by experience, that the Apothecaries spirit of vitriol will cure no falling sickness, which vertue is ascribed to that spirit, and indeed justly: for the true spirit of vitriol performeth that cure out of hand. Likewise their spirit of Tartar (as they call it) is no spirit, but only a stinking phlegm or vinegar.

The way to make such true spirits, I will now shew, because much good may be done by them in all manner of Diseases. And this way of distilling serveth only for those which seek after good Medicines: but others which care not whether their medicines be well prepared or no, need not take so much pains as to build such a furnace, and to make their spirits themselves, for at any time they can buy for a small matter, a good quantity of dead and fruitless spirits at the common sellers and

Apothecaries.

Hence it is no marvel, that now adaies so little good is done by Chymical medicaments, which of right should far out-strip all the Galenical in goodness and vertue. But alas! it is come to that pass now, that a true Chymist, and honest Son of *Hermes*, is forced almost to blush, when he heareth men talk of Chymical medicines, because they do no such miracles, as are ascribed unto them. Which infamy is occasion'd by none more, than by careless Physicians, which though they make use of Chymical medicines, (because they would fain be esteemed to know more than others) yet they do take greater care for their kitchen, than for the welfare of their Patients; and so buying ill-prepared Medicines of unskilful stillers, and withal using them undiscreetly (whereby they many times do more hurt than good to the sick) they lay such foul aspertions upon the noble Art of Chymistry.

But an industrious and accurate Physician is not ashamed to make his Medicines himself, if it be possible, or at least to have them made by good and well-exercis'd Artists: whereupon he may better rely, and get more credit, than one that knoweth not whereof, nor how his Medicine which he doth administer to his patients is prepared. But such wicked and ignorant men will one day fall short of their answer before the Judgment of the righteous Samaritan.

How to make the Acid Oyl and the volatile spirit of Vitriol.

Hitherto I have taught, how to distil in general, and to get the subtle spirits. There remaineth now to describe what Manuals or Preparations are fitting for

every matter in particular; and first,

Of Vitriol.

To distil Vitriol, there needs no other preparation, but only that it be well viewed, and if there be any filth amongst it, that the same be carefully pickt out, lest being put together with the Vitriol into the distilling vessel, the spirit be corrupted thereby. But he that will go yet more exactly to work, may dissolve it in fair water, then filtrate it, and then evaporate the water from it till a skin appear at the top, and then set it in a cold place, and let it shoot again into Vitriol; and then you are sure that no impurity is left in it.

Now your vessel being made red hot, with an Iron ladle cast in one or two ounces of your Vitriol at once, put on the lid, and presently the spirits together with the phlegm will come over into the receiver, like unto a white cloud or mist; which being vanished, and the spirits partly settled, carry in more Vitriol, and continue this so long, until your vessel be full: Then uncover your vessel, and with a pair of tongs or an iron ladle take out the Caput Mortuum, and cast more in; and continue this proceeding as long as you please, still emptying the vessel when it is filled, and then casting in more matter, and so proceeding until you conceive that you have got spirits enough. Then let the fire go out, and let the furnace cool; take off the receiver, and pour that which is come over into a retort, and set the retort in sand, and by a gentle fire distil the volatile spirit from the heavy oyl; having first joyned to the retort the receiver, which is to receive the volatile spirit, with a good lutum, such as is able to hold such subtle spirits, the making whereof shall be

taught in the fifth part of this Book, amongst the Manuals.

All the volatile spirit being come over, which you may know by the falling of bigger drops, then take off the receiver, and close it very well with wax, that the spirit may not make an escape; then apply another (without luting it) and so receive the phlegm by it self, and there will remain in the retort a black and heavy corrosive oyl, which if you please, you may rectifie, forcing it over by a strong fire, and then it will be clear; if not, let all cool, then take out your Retort together with the black oyl, and pour upon it the volatile spirit, which in the rectifying went over first, put the retort into the sand, and apply a receiver, and give it a very gentle fire, and the volatile spirit will come over alone, leaving its phlegm behind with the oyl, which by reason of its dryness doth easily keep it. Thus the spirit being freed from all phlegm, is become as strong as a meer fire, and yet not corrosive. And if this spirit be not rectified from its own oyl, it will not remain good, but there doth precipitate a red powder after it hath stood for some space of time, and the spirit loseth all its vertue, insomuch that it is not to be discerned from ordinary water, which doth not happen when it is rectified. The reason of this precipitation is no other than the weakness of the spirit, which is accompanied with too much water, and therefore not strong enough for to keep its sulphur, but must let it fall: but after it is rectified by its own oyl, it can keep its sulphur well enough, because then it is freed from its superfluous moisture. However the red powder is not to be thrown away, but ought to be kept carefully; because it is of no less vertue than the spirit it self. And it is nothing else but a Volatile sulphur of Vitriol. It hath wonderful vertues, some of

which shall be related.

The Use and Dose of the Narcotick sulphur of Vitriol.

Of this sulphur 1, 2, 3, 4. or more grains (according to the condition of the patient) given at once mitigates all pains, causeth quiet sleep; not after the manner of Opium, Henbane, and other the like medicines, which by stupifying and benumbing cause sleep, but it performeth its operation very gently and safely, without any danger at all, and great Diseases may be cured by the help thereof. *Paracelsus* held it in high esteem, as you may see, where he doth write of *Sulphur embryonatum*.

Of the Use and Vertue of the volatile spirit of Vitriol.

This sulphurous Volatile spirit of Vitriol, is of a very subtle and penetrating quality, and of a wonderful operation; for some drops thereof being taken and sweated upon, doth penetrate the whole body, openeth all obstructions, consumeth those things that are amiss in the body, even as fire. It is an excellent medicine in the Falling sickness, in that kind of madness or rage which is called *Mania*, in the Convulsion of the Mother, called *Suffocatio Matricis*, in the Scurvy; in that other kind of madness which is called Melancholia Hypochondriaca; and other Diseases proceeding from Obstructions and Corruption of the Blood: It is also good in the Plague, and all other Feavers: mingled with spirit of wine, and daily used, it doth wonders in all external accidents: Also in the Apoplexy, shrinking and other diseases of the Nerves, the distressed limb rubbed therewith, it doth penetrate to the very marrow in the bones; it doth warm and refresh the cold sinews, grown stiff: In the Cholick, besides the internal use, a

little thereof in a clyster applyed, is a present help: Externally used in the Gout, by anointing the places therewith, asswageth the Pains, and taketh away all tumours and inflammations: It doth heal scabs, tetters and ring-worms, above all other medicines; it cureth new wounds and old sores, as Fistulaes, Cancers, Wolves, and what name soever else they may have: It extinguisheth all inflammations, scaldings, the Gangrene, dissipateth and consumeth the knobs and excrescencies of the skin. In a word, this spirit, which the wise men of old called *Sulphur Philosophorum*, doth act universally in all diseases, and its vertue cannot sufficiently be praised and expressed: And it is much to be admired, that so excellent a Medicine is no where to be found.

If it be mingled with Spring water, it doth make it pleasantly sowrish, and in taste and vertue like unto the natural sowre water of wells.

Also by this spirit, many diseases may be cured at home; so that you need not go to bathes afar off, for to be rid of them.

Here I could set down a way, how such a spirit may be got in great abundance for the use of bathing, without distillation, whereby miraculous things may be done, but by reason of the ungratefulness of men, it shall be reserved for another time.

Of the vertue and use of the corrosive oyl of Vitriol.

This oyl is not much used in Physick, although it be found almost in every Apothecaries shop, which they use for to give a sowrish tast to their syrups and conserves. Mingled with spring water and given in hot diseases, it will extinguish the unnatural thirst,

and cool the internal parts of the body. Externally it cleanseth all unclean sores, applyed with a feather; it separateth the bad from the good, and layeth a good foundation for the cure.

Also if it be rectified first, some metals may be dissolved with it and reduced into their Vitriols, especially Mars and Venus; but this is to be done by adding common water thereunto, else it will hardly lay hold on them. The way of doing it is thus.

How to make the Vitriol of Mars and Venus.

Take of your heavy oyl, just as it came over, *viz.* together with its phlegm (but that the Volatile spirit be drawn off from it first) as much as you please, put it into a glass body together with plates of copper or iron, set it in warm sand, and let it boyl until that the oyl will dissolve no more of the metal, then power off the liquor, filtre it through brown paper, and put it into a low gourd glass, and set it in sand, and let the phlegm evaporate until there appear a skin at the top, then let the fire go out, and the glass grow cool; then set it in a cold place, and within some days there, will shoot fair Crystals; if of Iron, greenish; if of Copper, then something blewish; take them out and dry them upon filtering paper, the remaining liquor, which did not shoot into Vitriol, evaporate again in sand, and then let it shoot as before; continue this proceeding, until all the solution (or filtred liquor) be turned to Vitriol. This Vitriol is better and purer than the common; for it yieldeth a better Volatile spirit, and for that reason I did set down the way how to make it. There may also be made a good Vitriol of both these metals by the means of ordinary yellow brimstone; but because the making of it is more tedious, than of this here set

down, I think it needless to describe its preparation in this place.

The way to make a fair blew Vitriol out of Luna *(that is, silver.)*

Dissolve the shavings or filings of silver with rectified oyl of Vitriol, adding water thereunto, but not so much as to Iron and Copper: Or else, which is better, dissolve calcined silver, which hath been precipitated out of Aqua fortis either with Copper or salt water; the solution being ended pour it off and filtre it, and drop into it of Spirit of urin or Sal armoniac, as long as it doth hiss, and almost all the silver will precipitate again out of the oyl, and so there will fall a white powder to the bottom; This precipitated silver together with the liquor pour into a phiall-glass, set it to boyl in sand for twenty four hours, and the liquor will dissolve again almost all the precipitated silver-calx and become blew thereby. Then pour off the solution (or liquor) and filtre it through brown paper, and abstract the moisture till a skin arise at the top; then in a cold place let it shoot to Vitriol. With the remaining liquor proceed further, as above in the preparation of the Vitriol of Iron and Copper hath been taught.

By this way you will get an excellent Vitriol out of silver, which from 4, 5, 6, to 10. grains used only of it self, will be a good purge, especially in diseases of the brain.

If you have a good quantity of it, that you may distill a spirit thereof, you will get not only an acid (or sowre) but also a volatile spirit, which in the infirmities of the brain is most excellent; that which in the distilling remains behind, may be reduced again into a body, so that you lose nothing of the

silver, save onely that which is turned into spirit.

Moreover, the acid (or sowre) oyl of common Vitriol, doth precipitate all metals and stones of beasts or fishes; also pearls and corals, they being first dissolved in spirit of salt or of Nitre, and maketh fair light powders of them (which by the Apothecaries are called Magisteries) much fairer than by precipitation with salt of Tartar is done, especially of corals and pearls, such a fair glistering and delicate powder is made; and likewise also of mother of pearl, and other shels of snailes, that it giveth as fair a gloss to them, as the fairest oriental pearls have; which way hath not been made common hitherto, but being known only to few, hath been kept very secret by them, as a singular Art. Such Magisteries commonly were precipitated out of vinegar only by salt of Tartar, which for lightness, whiteness and fair gloss are not comparable at all to ours: But if instead of the oyl of Vitriol you take oyl of sulphur, then these powders will be fairer than when they are done by the oyl of Vitriol, in so much, that they may be used for painting for a black skin.

Having made mention of Magisteries, I cannot forbear to discover the great abuse and error, which is committed in the preparing of them.

Paracelsus in his Archidoxes teacheth to make Magisteries, which he calleth extracted Magisteries: but some of his disciples teach to make precipitated Magisteries which are different from the former. *Paracelsus* is clean of another opinion in the preparing of his Magisteries, than others in the making of theirs: doubtless *Paracelsus* his Magisteries were good cordial living medicines, whereas the other are but dead carkases, and although they be never so fair, white and glistering, yet in effect they

prove but a gross earthy substance, destitute of vertue.

I do not deny, but that good medicines may be extracted out of pearls and corals, for I my self also do describe the preparations of some of them; but not at all after such a way as theirs is. For what good or exalting can be expected by such a preparation, where a stony matter is dissolved in corrosive waters, and then precipitated into stone again? Can its vertue be increased thereby? surely no, but rather it is diminished, and made much the worse thereby. For it is well known, that the corrosive spirits (no less than fire) do burn some certain things; for not all things are made better by fire or corrosives, but most of them are absolutely spoyled by them. Some perchance will say, that such preparations of Magisteries are onely for to be reduced into a finer powder, that so much the sooner they may perform their operation. To which I answer, that pearls, corals, and other things of the like nature, if they be once dissolved by corrosive waters, and then precipitated and edulcorated, never or hardly can be dissolved again by acid spirits. Whence it is evident that by such preparations they are not opened or made better, but rather closed or made worse. And we see also by daily experience that those Magisteries do not those effects, which are ascribed unto them. By which it appeareth clearly, that to the Archeus of the stomach they are much less grateful than the crude unprepared corals and pearls; whose tender essence being not burnt up by corrosives, do oftentimes produce good effects. For our Ancestors have ascribed unto corals and pearls, that they purifie the impure and corrupt blood in the whole body, that they expel Melancholly and sadness, comforting the heart of man, and making it merry,

which also they effectually perform: whereas the Magisteries do not. And this is the reason, why unprepared corals, pearls and stones of fishes have more effect, than the burnt Magisteries. For it is manifest and well known, that the abovesaid diseases for the most part do proceed from obstructions of the spleen, which obstructions are nothing else, but a tartarous juice or a sowre flegme which hath possessed and filled up the entrals, and coagulated it self within them. By which obstruction not only head-ach, giddiness, panting of the heart, trembling of the limbs, a spontaneous lassitude, vomits, unnatural hunger; also, loathing of victuals; then cold, then hot flushing fits, and many more strange symptomes are caused; but also a most hurtful rottenness and corruption is introduced into the whole mass of blood, from whence the leprosie, scurvey, and other loathsome or abominable scabs do spring.

Of which evil the onely cause (as hath been said) is a crude acid Tartar, from which so many great diseases do rise.

This to be so may easily be proved; for it is notorious, that melancholick folks, hypocondriaques, and others do often cast up a great quantity of acid humor, which is so sharpe that no vinegar is comparable to it, and doth set their teeth on such an edge, as if they had eaten unripe fruit.

What remedy now? take away the cause and the disease is taken away. If you could take away the peccant matter by purgings, it would be well, but it remaineth obstinate and will not yield to them. By vomit it may be diminished in some measure. But because that not every one can abide vomiting, it is therefore no wisdome to turn evil into worse. Shall

then this tartar be killed and destroyed by contraries, which indeed in some sort may be effected; as when you use vegetables or animals, whose vertue consisteth in a volatile salt: such are all species or sorts of cresses, Mustard-seed, horse-radish, scurvy grass, also the spirit of Tartar, of Harts-horn, and of urine and the like, which by reason of their penetrating faculty pass through all the body, finding out the Tartar thereof, destroying the same, as being contrary unto it; and in this combat two contrary natures is kindled, a great burning heat, whereby the whole body is throughly heated and brought to sweating; and whensoever by these contraries a sweating is caused, there is always mortified some of this hurtful Tartar. But because that of that acid humor but a little at a time can be mortified and edulcorated by contrary volatile spirits, and that therefore it would be required to use them often, for to kill and expell all the Tartar; and because also (as hath been mentioned before) a strong sweat always is caused by every such operation, whereby the natural spirits are much weakened, so that the patient would not be able to hold out long thereby, but by taking away of one evil, another and greater one would be occasioned.

And therefore such things must be offered to that hungry acid humour, by which the corrosive nature thereof, may be mortified and grow sweet, with that proviso nevertheless, that those things be such as are not contrary or hurtful to the nature of man, but grateful and friendly, as are corals, pearls and crabs eyes, *&c.*

For amongst all stones none are more easily to be dissolved than Pearls, Corals, Crabbs-eyes, and other stones of fishes.

But the truth of this, *viz.* that every corrosive is killed by feeding upon pearls and corals, and thereby can be made sweet; and besides, how a sowre coagulated Tartar, by the help of corals or pearls may be reduced to a sweet liquor (a pleasant and acceptable medicine to the nature of man) which never can be coagulated again by any means, shall be afterwards proved and taught when I shall come to treat of Tartar.

Now in tartareous coagulations and obstructions of the internals proceeding from the predominancy of an acid humor there is no better remedy, than to give the patient every morning fasting from Ɔss. to ʒ i. (more or less, according to the condition of the patient) of red corals and pearls made into powder, and to let him fast two or three hours upon it, and so to continue daily until you see amendment: By this means the hurtful acid humor is mortified, and dulcified by the corals and pearls, so that afterwards it may be overcome by nature, whereby the obstructions are removed, and the body freed from the disease.

This my opinion of the abuse of Magisteries and the good use of Corals I could not conceal, although I do know for certain, that it will take but with few, in regard that it will seem very strange to most. However, happily there may be some yet, that will not be unwilling to search into the truth, and to consider further of it, and at last will find this not to be so strange, as it seemed to them at the first: but he that cannot believe or comprehend it, may keep to his Magisteries.

And if it seem so strange unto any, that corals or pearls made into powder shall be concocted in the stomach, and so put forth their vertue, what will you

say then, if I do prove, that even whole pearls, crabs eyes, and corals being swallowed, are totally consumed by the Melancholy humor, so that nothing cometh forth again among the excrements? and which is more, even the like may be said of hard and Compact metals, as Iron, and Speaucer or Zinck: But this must be understood only of those that are of a Melancholick constitution but not so in others, *viz.*, those that are of a sanguine, and those that are of a phlegmatick constitution, to whom such like things are seldom prescribed. For I have seen many times, that against obstructions, to strong bodies there hath been given at once from Ɔss. to ʒ i. of the shavings or filings of Iron, and they found much good by it, yea more help then by other costly medicines of the Apothecaries, whereof they had used many before, but to no purpose, by reason whereof their excrements came from them black, just as it useth to fall out with those that make use of medicinal sowre waters, which run through iron mines, and thereby borrow a spiritual mineral vertue.

Now if those filings of iron had not been consumed in the stomach, how come it that the excrements are turned black? so then it is sufficiently proved, that even a hard unprepared metal can be consumed in the stomach: and if so, why not as well soft pearls and corals?

Which is also to be seen by children, that are troubled with worms, if there be given unto them 4, 6, 8. to 12. or 16. grains of the finest filings of steel or iron, that all the worms in the body are killed thereby, their stomach and guts scowred very clean, and their stools also turned black. But this must be observed by children, when the worms are killed, and yet remain in the guts (because that the iron in a

smal quantity is not strong enough for to expel them, but only make the body soluble) that a purge must be used after, for to carry them out; for else if they do remain there, others will grow out of their substance. But to those that are more in years, you may give the Dose so much the stronger, as from ℈ i. to ʒ i. that the worms also may be carryed out, they being better able to endure it than little children, and although sometimes a vomit doth come, yet it doth no hurt, but they will be but so much the healthier afterward.

And thus Iron may be used, not only against worms, but also against all stomach-agues, head-ach, and obstructions of the whole body, without any danger and very successfully, as a grateful or very acceptable medicine to Nature; for after a powerful magnetical way it doth attract all the ill humors in the body, and carrieth them forth along with it. Of whose wonderful vertue and nature, there is spoken more at large in my Treatise of the Sympathy and Antipathy of things. Which some Physitians perceiving and supposing by Art to make it better, they spoiled it, and made it void of all vertue: for they taking a piece of steel, made it red-hot, and held it against a piece of common Sulphur, whereby the steel grew subtle, so they did let it drop into a vessel filled with water; then they took it out, and dryed it, and made it into powder, and used it against obstructions, but to no effect almost; for the Iron was so altered by the sulphur, and reduced to an insoluble substance (which ought not to have been so) that it could perform no considerable operation: But if they had made the steel more soluble (whereas they made it more insoluble) than it was of it self before, then they had done a good work: for he that knoweth sulphur, doth know well enough, that by no

Aquafortis or *Aqua Regis* it can be dissolved; and how could it then be consumed by an animal humor?

Hitherto it hath been proved sufficiently, that in some men, especially in those that are of a Melancholick constitution there is an acid humor, which can sufficiently dissolve all easily soluble metals and stones: and that therefore it is needless to torture, and dissolve pearls, corals and the like with corrosive waters before they be administred to patients: but that the Archeus of the stomach is strong enough by the help of the said humors to consume those easily soluble things, and to accept of that which serveth his turn, and to reject the rest.

But it is not my intent here, that this should be understood of all metals and stones; for I know well, that other metals and stones (some excepted) before they are duly prepared, are not fit for Physick, but must be fitted first, before they be administred or given unto patients.

For this relation I made only for to shew, how sometimes good things (though with intent to make them better) are made worse, and spoiled by those that do not make an exact search into nature and her power.

I hope this my admonition will not be taken ill, because my aim was not vain-glory, but only the good of my neighbour.

Now let us return again to Vitriol.

Of the sweet oyl of Vitriol.

The Ancients make mention of a sweet and green oyl of Vitriol, which doth cure the falling sickness, killeth worms, and hath other good qualities and vertues besides: and that the Oyl is to be distilled *per*

descensum. To attain unto this oyl the later Physitians took great paines, but all in vain: because they did not understand at all the Ancients about the preparing of this oyl, but thought to get it by the force of fire, and so using violent distillation, they got no sweet oyl, but such as was very sowre and corrosive, which in taste, efficacy and vertue, was not comparable at all to the former.

However they ascribed unto it (though falsely) the same vertues, which the ancients (according to truth) did unto theirs. But daily experience sheweth, that the oyl of vitriol as it is found ordinarily, cureth no falling sickness, nor killeth worms, whereas this Philosophical doth it very quickly. Whence it appeareth, that the other is nothing like unto the true medicinal oyl of vitriol, neither is it to be compared to it.

I must confess indeed, that *per descensum* out of common vitriol, by the force of the fire, there may be got a greenish oyl, which yet is not better than the other, because it proveth as sharp in tast, and of as corroding a quality, as if it had been distilled through a Retort.

Those that found out this oyl, as *Paracelsus*, *Basilius*, and some few others, did always highly esteem it, and counted it one of the four main pillars of Physick. And *Paracelsus* saith expresly in his writings, that its viridity or greenness must not be taken away or marred (which indeed a very little heat can do) by the fire, for (saith he) if it be deprived of its greenness, it is deprived also of its efficacy and pleasant essence. Whence it may be perceived sufficiently, that this sweet green oyl is not to be made by the force of the fire as hitherto by many hath been attempted, but in vain.

And it is very probable, that the ancients, which did so highly praise the oyl of vitriol, happily knew nothing of this way of distilling, which is used by us now a days: for they only simply followed Nature, and had not so many subtle and curious inventions and ways of distilling.

But however it is certain, that such a sweet and green oyl cannot be made of vitriol by the force of the fire, but rather must be done by purification, after a singular way; for the Ancients many times understood purification for distillation: as it is evident, when they say, distill through a filtre, or through filtring paper: which by us is not accounted for distillation, but by them it was.

However, this is true and very sure, that a great Treasure of health (or for the health of man) lyeth hidden in Vitriol: yet not in the common, as it is sold every where, and which hath endured the heat of the fire already; but in the Oare as it is found in the earth, or its mine. For as soon as it cometh to the day light, it may be deprived by the heat of the Sun of its subtle and penetrating spirit, and so made void of vertue; which spirit, if by Art it be got from thence, smelleth sweeter then musk and amber, which is much to be admired, that in such a despicable mineral and gross substance (as it is deemed to be by the ignorant) such a royal medicine is to be found.

Now this preparation doth not belong to this place, because we treat here only of spirits, which by the force of fire are driven over. Likewise also, there doth not belong hither the preparation of the green oyl, because it is made without the help of fire. But in regard, that mention hath been made of it here, I will (though I kept it always very secret) publish it for the benefit of poor patients, hoping that it will do

much good to many a sick man.

For if it be well prepared, it doth not only cure perfectly every Epilepsie or Convulsion in young and old; and likewise readily and without fail killeth all worms within and without the body, as the Ancients with truth ascribed unto it; but also many Chronical diseases and such as are held incurable, may be happily overcome and expelled thereby, as the plague, pleuresie, all sorts of feavers and agues, what ever they be called, head-ach, collick, rising of the mother; also all obstructions in the body, especially of the spleen and liver, from whence *Melancholia Hypochondriaca*, the scurvy, and many other intolerable diseases do arise: Also the blood in the whole body is by the means thereof amended and renewed, so that the Pox, Leprosie, and other like diseases proceeding from the infection of the blood are easily cured thereby: Also it healeth safely and admirably all open sores and stinking ulcers turned to fistula's in the whole body, and from what cause so ever they did proceed, if they be anoynted therewith, and the same also be inwardly used besides.

Such and other diseases more (which it is needless here to relate) may be cured successfully with this sweet oyl; especially, if without the loss of its sweetness it be brought to a red colour; for then it will do more then a man dare write of it, and it may stand very well for a *Panacea* in all diseases.

The preparation of the sweet oyl of Vitriol.

Commonly in all fat soyles or clayie grounds, especially in the white, there is found a kinde of stones, round or oval in form, and in bigness like unto a pigeons or hens-egg, and smaller also, *viz.* as

the joynt of ones finger, on the outside black, and therefore not esteemed when it is found, but cast away as a contemptible stone. Which if it be cleansed from the earth, and beaten to pieces, looks within of a fair, yellow and in streaks, like a gold Marcasite, or a rich gold Oare, but there is no other taste to be perceived in it, then in another ordinary stone; and although it be made into powder, and boyled a long time in water, yet it doth not alter at all, nor is there in the water any other taste or colour, than that which it had first (when it was poured upon the stone) to be perceived. Now this stone is nothing else, but the best and purest Minera (or Oare) of Vitriol, or a seed of Metals; for Nature hath framed it round, like unto a vegetable seed, and sowed it into the earth, out of which there may be made an excellent medicine, as followeth.

Take this Oare or Minera beaten into pieces, and for some space of time, lay or expose it to the cool air, and within twenty or thirty days it will magnetically attract a certain saltish moysture out of the air, and grow heavy by it, and at last it falleth asunder to a black powder, which must remain further lying there still, until it grow whitish, and that it do taste sweet upon the tongue like vitriol. Afterward put it in a glass-vessel, and pour on so much fair rain water, as that it cover it one or two inches; stir it about several times in a day, and after a few days the water will be coloured green, which you must powre off, and powre on more fair water, and proceed as before, stirring it often until that also come to be green: this must be repeated so often, until no water more will be coloured by standing upon it. Then let all the green waters which you poured off, run through filtring paper, for to purifie them; and then in a glass-body cut off short let them

evaporate till a skin appear at the top: then set it in a cold place, and there will shoot little green stones, which are nothing else but a pure vitriol: the remaining green water evaporate again, and let it shoote as before: and this evaporating and Crystallising must be continued until no vitriol more will shoote, but in warm and cold places there remain still a deep green pleasant sweet liquor or juyce: which is the true sweet and green oyl of Vitriol, and hath all the vertues above related.

But now this green oyl further without fire may at last (after the preparing of many fair colours between) be reduced to a blood red, sweet and pleasant oyl, which goeth far beyond the green both in pleasantness and vertue, and is in comparison to it like a ripe grape to an unripe: Hereof happily shall be spoken at another time, because occasion and time will not permit me now to proceed further in it. And therefore the Philo-Chymical Reader is desired for the present to be contented with the green oyl, to prepare it carefully, and to use it with discretion; and doubtless he will get more credit by it, and do more wonderful things then hitherto hath been done by the heavy corrosive oyl.

The use and Dose of the sweet oyl of Vitriol.

Of this green oyl, there may be taken from 1. 2. 4. 8. 10. or 12. drops at once, according to the condition of the patient and the disease, in fit Vehicles, in Wine or Beer, in the morning fasting, as other medicines are usually taken: Also the Dose may be increased or lessened, and as often reiterated as the disease shall require.

This Oyl expelleth all ill humors, not only by

stoole and vomits, but also by urin and sweating, according as it doth meet with superfluities; and this very safely, and without any danger at all; whereby many diseases radically or perfectly may be cured.

Let no man wonder that I ascribe such great vertues unto this oyl, it coming from such a despicable stone, and its preparation requiring no great Art or paines, as those intricate deceitful processes do, that are every where extant in books quite filled up with them. And it is no marvel, that men are in love with such false and costly processes; for the most of them do not believe, that any good is to be found in things that are not in esteem; but only make great account of dear things, far fetcht, and requiring much time and paines for to be prepared.

Such men do not believe the word of God, testifying, *That God is no respecter of persons*, but that all men that fear and love him, are accepted of him. If this be true (which no good Christian will doubt) then we must believe also, that God created Physick or the matter of Physick as well for the poor as for the rich. Now if it be also for the poor, then certainly such will be the condition thereof, that it may be obtained by them, and easily prepared for use. So we see that Almighty God causeth not only in great mens grounds to come forth good Vegetables, Animals and Minerals, for the curing of the infirmities of mankind, but that the same also are found every where else. Whereby we perceive, that it is also the will of God, that they shall be known by all men, and that he alone, as the Maker of all good, may be praised and magnified by all men for the same.

I doubt not but that there will be found self-conceited scoffers, that will despise this so little

regarded subject, as if no good thing could be made of it, because they could find nothing in it themselves. But be it known to them, that neither to me nor them all things have been discovered, but that yet many wonderful works of Nature are hidden to us: and besides that I am not the first that writ of Vitriol and its medicine. For the Ancients, our dear Ancestors, had always Vitriol in very great esteem, as the following Verse doth prove.

Visitabis Interiora Terræ, Rectificando
Invenies Occultum Lapidem, Veram Medicinam.

Whereby they would give us to understand, that a true medicine is to be found in it. And the same also was known to the latter Philosophers: for *Basilius* and *Paracelsus* have always highly commended it, as in their writings is to be found.

It is to be admired, that this Oare or Metallical seed, which may justly be called the gold of Physitians (in regard that so good a medicine can be made of it) is not changed or altered in the earth, like other things that grow in it, but keepeth always the same form and shape, until it cometh to the air, which is its earth or ground, wherein it putrefieth and groweth. For first it swelleth and groweth like as a vegetable seed doth in the earth: and so taketh its increase and grows out of the air, just as a seed of an hearb in the earth; and the air is not only its Matrix, wherein it groweth and doth increase like a vegetable, but it is also its Sun which maketh it ripe. For within four weeks at the furthest it putrefieth and groweth black: and about a fourtnight after it groweth white, and then green; and thus far it hath been described here: But if you proceed further Philosopher-like therewith, there will come forth to

light at the last the fairest red, and most pleasant Medicine, for which God be praised for ever and ever, Amen.

Of the Sulphureous volatile and Acid spirit of common Salt, and of Allome.

The same way, which above hath been taught for the making of the volatile spirit of vitriol, must be likewise used in the making of the volatile spirits of common salt and allome.

The manner of preparing.

Allome is to be cast in as it is of it self, without mixing of it, but salt must be mixed with bole, or some other earth, to keep it from melting: with the spirit volatile, there goeth also along an acid spirit, whose vertue is described in the first part. The Oyl of Allome hath almost the like operation with the oyl of vitriol. Also the spirit volatile of both these, is of the same nature and condition with that which is made of vitriol: but common salt, and allome, do not yield so much, as vitriol; unless both, *viz.* salt and allome be mixed together, and so a spirit distilled of them.

Of the sulphureous volatile spirit of Minerals and Metals, and of their preparation.

Such a penetrative sulphureous spirit may be made also of Minerals and Metals, which in vertue goeth beyond the spirit of vitriol, that of common salt, and that of allome, *viz.* after the following manner.

The preparation of the volatile spirits of Metals.

Dissolve either Iron or Copper, or Lead or Tin with the acid spirit of vitriol, or of common salt: abstract or

draw off the phlegm; then drive the acid spirit again from the Metal, and it will carry along a volatile spirit, which by rectifying must be separated from the corrosive spirit. And such Metallical spirits are more effectual than those that are made of the salts.

The preparation of the volatile spirit of Minerals.

Take of Antimony made into fine pouder, or of golden Marcasite, or of some other sulphureous Mineral, which you please, two parts, mix therewith one part of good purified Salt nitre, and cast in of that mixture a small quantity, and then another, and so forth after the manner above described; and there will come over a spirit which is not inferiour to the former in efficacy and vertue; but it must also be well rectified.

Another way.

Cement what laminated or granulated Metal you please, (except gold) with half as much in weight of common sulphur, closed up in a strong melting pot or crucible, such as doth not let the sulphur go through, for the space of half an hour, until that the sulphur hath penetrated and broken the plates of Metal: Then beat them into powder, mix them with the like quantity in weight of common salt, and so distil it after the way above mentioned, and you will get a volatile spirit of great vertue: and every such spirit is to be used for such special part or member of the Body, as the Metal is proper for, out of which the spirit is made. So silver for the brain; Tinn for the lungs, Lead for the spleen, and so forth.

The spirit of Zinck.

Of Zinck there is distilled both a volatile and also an acid spirit, good for the heart; whether it be made by the help of the spirit of vitriol, or of salt, or of allome: or else by the means of Sulphur; for Zinck is of the nature of gold.

The volatile spirit of the Dross of Regulus Martis.

The black scoria of the *Regulus Martis*, being first faln asunder in the air, yields likewise a very strong sulphureous volatile spirit, not much unlike in vertue unto the former.

The like Sulphureous volatile spirits may be made also of other minerals, which for brevities sake we omit, as also in regard, that they are almost the same in vertue.

How to make a white acid, and a red volatile spirit out of salt nitre.

Take two parts of Allome, and one part of salt nitre, make them both into powder, mix them well together, and cast into the still a little and a little thereof, as above in the making of other spirits hath been taught, and there cometh over an acid spirit together with the volatile spirit; and so many pounds as there is of the materials, which are to be cast in, so many pounds of water must be put into the receiver, to the end that the volatile spirits may so much the better be caught and saved. And when the distillation is performed, the two spirits may be separated by the means of a gentle rectification made in *Balneo*; and you must take good heed, that you get the volatile spirit pure by changing the receiver in good time, so that no flegme be mixed with the red spirit, whereby it will be weakened and turn white. The mark whereby you may perceive, whither the

spirit or the flegme doth go forth is this: when the volatile spirit goeth, then the receiver looketh of a deep red: and afterward when the flegme doth come, the receiver looks white again: and lastly, when the heavy acid spirit goeth, then the receiver to be red again, but not so as it was, when the first volatile spirit came over.

This spirit may also be made and distilled after another way, *viz.* mixing the salt nitre with twice as much bole or brick dust, and so framed into little balls to prevent melting: but no way is so good as the first, especially when you will have the red volatile spirit.

Of the use of the red volatile spirit.

This volatile spirit, which (being quite freed from flegm) remaineth always red, and doth look like blood, in all occasions may be accounted like in vertue unto the former sulphureous spirits, especially in extinguishing of inflammations and Gangreens it is a great treasure, clothes being dipt in it, and laid upon the grieved place; Also it goeth almost beyond all other medicines in the Erysipelas and colick: and if there be any congealed blood in the body (which came by a fall or blow) this spirit outwardly applyed with such waters as are proper for the grief, and also taken inwardly, doth dissolve and expell it: and being mingled with the volatile spirit of urin it doth yield a wonderful kind of salt, as hereafter shall be taught.

The use of the white acid spirit of salt nitre.

The heavy and corrosive spirit of salt nitre is not much used in Physick, though it be found almost in all Apothecaries shops, and there is kept for such

use, as above hath been mentioned of the spirit of vitriol, *viz.* to make their conserves, and cooling-drinks tast sowrish. Also it is used by some in the colick, but it is too great a corrosive, and too gross to be used for that purpose; and although its corrosiveness may be mitigated in some measure, by adding of water thereto, yet in goodness and vertue it is not comparable at all to the volatile spirit, but is as far different from it, as black from white, and therefore the other is fittest to be used in Physick; but this in dealing with metals and minerals, for to reduce them into vitriols, calxes, flores, and crocus.

Aqua Regis.

If you dissolve common salt (which hath been decrepitated first) in this acid spirit of salt nitre, & rectifie it by a glass retort in sand by a good strong fire, it will be so strong, that it is able to dissolve gold, and all other metals and minerals, except silver and sulphur; and several metals may by the means thereof be separated much better than by that Aqua regia which hath been made by adding of Salt Armoniack. But if you rectifie it with *lapis calaminaris* or Zinck, it will be stronger yet, so as to be able to dissolve all metals and Minerals (silver and sulphur excepted) whereby in the handling of Metals, much more may be effected, than with common spirit of salt nitre or Aqua fortis, as hereafter shall be taught: and first in the preparing of gold.

The Preparation of Aurum Fulminans, or Aurum Tonitruans.

Take of fine granulated or laminated gold (whither it be refined by Antimony or *Aqua fortis*) as much as you please: put it in a little Glass body, and pour four

or five times as much of *Aqua regis* upon it, set it stopt with a Paper in a gourd in warm sand; and the *Aqua regis* within the space of one or two hours will dissolve the gold quite into a yellow water: but if it have not done so, it is a sign that either the water was not strong enough, or that there was too little of it for to dissolve it. Then pour the solution from the gold, which is not dissolved yet, into another glass, and pour more of fresh *Aqua Regia* upon the gold: set it again to dissolve in warm sand or ashes, and the remaining gold will likewise be dissolved by it, and then there will remain no more, but a little white calx, which is nothing else but silver, which could not be dissolved by the *Aqua Regia* (for the *Aqua Regia*, whether it be made after the common way with salt Armoniack, or else with common salt, doth not dissolve silver) so in like manner common *Aqua fortis*, or spirit of salt nitre dissolveth no gold; but all other metals are dissolved as well by strong *Aqua fortis* as by *Aqua Regia*. And therefore you must be careful to take such gold as is not mixed with Copper, else your work would be spoiled: for if there were any Copper mixed with it, then that likewise would be dissolved and precipitated together with the gold; and it would be a hindrance to the kindling or fulminating thereof: but if you can get no gold, that is without Copper, then take Ducats or Rose-nobles, which ought to have no Addition of Copper, but only of a little Silver, which doth not hurt, because that it cannot be dissolved by the *Aqua Regia*, but remaineth in the bottom in a white powder. Make those Ducats or Rose-nobles red hot, and afterward bend them and make them up in Rolls, and throw them into the *Aqua Regia* for to dissolve. All the gold being turned into a yellow water, and poured off, pour into it by drops a pure oyl made of

the Salt of Tartar, *per deliquium*, and the gold will be precipitated by the contrary liquor of Salt of Tartar into a brown yellow powder, and the solution will be clear. But you must take heed, to pour no more oyl of Tartar into it than is needful for the precipitation of the gold; else part of the precipitated gold would be dissolved again, and so cause your loss. The gold being well precipitated, pour off the clear water from the gold calx by inclination, and pour upon it warm rain or other sweet water, stir it together with a clean stick of wood, and set it in a warm place, until the gold is settled, so that the water standeth clear upon it again; then pour it off, and pour on other fresh water, and let it extract the saltness out of the gold calx: and this pouring off, and then pouring on of fresh water again, must be reiterated so often, until no sharpness or saltness more be perceived in the water that hath been poured off: Then set the edulcorated gold into the Sun or another warm place for to dry. But you must take heed that it have no greater heat than the heat of the Sun is in *May* or *June*, else it would kindle or take fire, and (especially if there be much of it) give such a thunderclap, that the hearing of those that stand by, would be much endangered thereby, and therefore I advice you to beware, and cautious in the handling of it, lest you run the hazard both of your gold and of your health by your over-sight.

There is also another way for to edulcorate your precipitated gold, *viz.* thus, Take it together with the salt liquor, and pour it into a funnel lined with brown Paper laid double, and so let the water run through into a glass vessel, whereupon the funnel doth rest, and pour on other warm water, and let it run through likewise; do this again and again, until that the water come from it as sweet as it was poured

on. Then take the Paper with the edulcorated gold calx, out of the funnel, lay it, together with the paper, upon other brown paper lying severally double together, and the dry paper will attract all the moistness out of the gold calx, so that the gold will be dryed the sooner. Which being dry, take it out of the filtering paper, and put it into another that is clean, and so lay it aside, and keep it for use. The salt water that came through by filtering, may be evaporated in a little glass body (standing in sand) to the dryness of the salt, which is to be kept from the air: for it is likewise useful in Physick; because some vertue of the nature of gold is yet hidden in it: though one would not think it, in regard that it is so fair, bright and clear, which for all that may be observed by this, that when you melt it in a clean covered crucible or pot, and pour it afterward into a clean Copper morter or bason (being first made warm) you get a purple-coloured salt, whereof 6, 9, 12, to 24. grains given inwardly, doth cleanse and purge the stomach and bowels, and especially it is useful in feavers and other diseases of the stomach. But in the crucible, out of which the salt hath been poured, you will find an earthy substance, which hath separated it self from the salt, and looketh yellowish; this being taken out and melted in a little crucible by a strong fire, turneth to a yellow glass, which is impregnated with the Tincture of Gold, and doth yield a grain of Silver in every regard like unto common cupellated silver, wherein no gold is found, which is to be admired: because that all Chymists are of opinion, that no *Aqua regia* can dissolve silver which is true. The question therefore is, from whence or how this silver came into the salt, since no *Aqua Regia* doth dissolve silver? whereupon some perchance may answer, that it must have been in the

oyl of Tartar, in regard that many do believe, that the salts likewise may be turned into metals, which I do not gainsay, but only deny that it could have been done here; for if that silver could have been existent in the *Aqua Regia*, or salt of Tartar (whereas *Aqua Regia* cannot bear any) it would have been precipitated together with the gold. But that it was no common silver, but gold which turned to silver after it was deprived of its Tincture, I shall briefly endeavour to prove. For that the salt waters (of *Aqua Regia* and salt of Tartar) out of which the gold hath been precipitated, is of that nature, before it be coagulated to salt, though it be quite clear and white, that if you put a feather in it, it will be dyed purple within few days, which purple colour comes from the gold, and not from silver, in regard that silver doth dye red or black: and hence it appeareth, that the salt water hath retained something of gold.

Now some body peradventure may ask, if that the said salt water hath retained some gold, how is it then, that in the melting, no gold comes forth, but only silver? To which I answer, that some salts are of that nature, that in the melting, they take from gold its colour and soul; whereof if the gold be truly deprived, it is then no more gold, nor can be such; neither is it silver, but remaineth only a volatile black body, good for nothing, which also proveth much more unfixt than common Lead, not able to endure any force of fire, much less the cupel: But like *Mercury* or *Arsenick* vanisheth (or flyeth away) by a small heat. Hence it may be gathered, that the fixedness (or fixity) of gold doth consist in its soul or Tincture, and not in its body, and therefore it is credible, that gold may be anatomized, its best or purer part separated from the grosser (or courser) and so that a Tingent medicine (or Tincture) may be

made of it. But whether this be the right way, whereby the universal medicine of the ancient Philosophers (by whose means all metals can be changed or transmuted into gold) is to be attained unto, I will not dispute; yet I believe that peradventure there may be another subject, endued with a far higher Tincture than gold is, which obtained no more from nature, than it doth need it self for its own fixedness. However, we may safely believe, that a true Anima or Tincture of gold, if it be well separated from its impure black body, may be exalted and improved in colour; so that afterwards of an imperfect body a greater quantity, than that was from which it was abstracted, may be improved and brought to the perfection of gold. But waving all this, it is true and certain, that if the gold be deprived of its Tincture, the remaining body can no more be gold; as is demonstrated more at large in my Treatise (*de Auro potabili vero*) of the true potable Gold: And this I mentioned here onely therefore, that in case the lover of this Art, in his work should meet perchance with such a white grain, he may know, from whence it doth proceed.

I could have forborn to set down the preparation of the fulminating gold, and so save paper and time, in regard that it is described by others: but because I promised in the first part to teach how to make the flores of gold, and that those are to be made out of fulminating (or thundring) gold, I thought it not amiss to describe its preparation, that the lover of this Art need not first have his recourse to another book for to find out the preparation, but by this my book may be furnished with a perfect instruction for the making of the flores of gold, and this is the common way for to make *Aurum fulminans*, known unto most Chymists; but in regard that easily an

error may be committed in it, either by pouring on too much of the liquor of Tartar (especially when it is not pure enough, so that not all the gold doth precipitate, but part of it remaineth in the solution, whereby you would have loss; or else, the gold falling or precipitating into a heavy calx, which doth not fulminate well, and is unfit for to be sublimed into flores.

Therefore I will here set down another and much better way, whereby the gold may be precipitated quite and clean out of the *Aqua Regia* without the least loss, and so that it cometh to be very light and yellow, and doth fulminate twice as strong as the former, and there is no other difference between this and the former preparation, but only that instead of the oyl of Tartar, you take the spirit of urine, or of salt armoniack for to precipitate the dissolved gold thereby; and the gold (as before said) will be precipitated much purer, than it is done by the liquor of the salt of Tartar, and being precipitated, it is to be edulcorated and dryed, as above in the first preparation hath been taught.

The use of Aurum fulminans.

There is little to write of the use of *Aurum fulminans* in physick; for because it is not unlockt, but is only a gross calx and not acceptable to the nature of man, it can do no miracle. And although it be used to be given *per se* from 6, 8, 12. grains to ℈ i. for to provoke sweating in the Plague, and other malignant feavers, yet it would never succeed so well as was expected. Some have mixed it with the like weight of common sulphur, and made it red hot (or calcined it) whereby they deprived it of its fulminating vertue, supposing thus to get a better medicine, but all in

vain, for the gold calx would not be amended by such a gross preparation. But how to prepare a good medicine out of *Aurum fulminans*, so that it may be evidently seen, that the gold is no dead body, nor unfit for physick, but that it may be made quick and fit for to put forth or shew forth those vertues which it pleased God to treasure up in it, I shall here briefly discover.

First, get such an instrument (as above hath been taught) made for you out of Copper, but not too big, nor with a lid at the top, but only with a pipe, unto which a receiver may be applyed, which must not be luted to it; but it sufficeth, that the pipe enter far into the belly of the receiver; and at the lower part it must have a flat bottom, that it may be able to stand: over the bottom there must be a little hole with a little door, that closeth very exactly: and there must be also two little plates or scales of silver or copper, as big as the nail of ones finger, whereupon the *Aurum fulminans* is to be set into the Instrument; which is to stand upon a Trevet, under which you are to lay some burning Coals for to warm or heat the bottom withal. The Instrument together with the glass Receiver being so ordered, that it stands fast, and also the bottom thereof being warmed or heated, then with little pincers one of the little scales, containing 2, 3, or 4. grains of *Aurum fulminans* must be conveyed upon the Instrument set upon the warm bottom, and then shut the little door, and when the gold doth feel the heat, it kindleth and giveth a clap, and there is caused a separation, and especial unlocking of the gold; for as soon as the clap is done, the gold doth go through the pipe like a purple coloured smoak into the receiver, and sticks on every where like a purple coloured powder. When the

smoak is vanished, which is soon done, then take the empty scale out of the Instrument or Oven, and set it with the gold, which will likewise fulminate and yield its flores. Then the first being cooled in the mean time, is to be filled again and put in, instead of that which is empty, and taken out, putting in one scale after another by turns, continue it so long till you have got flores enough: After the sublimation is performed, let the Copper Vessel grow cool, and then sweep or brush the gold powder which is not sublimed with a haires foot, or goose feather out of the vessel, which powder serves for nothing, but to be melted with a little borax, and it will be good gold again, but onely somewhat paler than it was before it was made into fulminating gold. But the flores in the receiver cannot be brushed out thus, especially when they are cast in with an addition of salt Nitre, as by the flores of silver hereafter shall be taught, because they are something moist, and therefore pour in as much of dephlegmed Tartarised spirit of wine unto it, as you think to be enough, for to wash off the flores with. This done, pour out the spirit of wine, together with the burnt Phœnix into a clean glass, with a long neck, set it (being well luted first) into a gentle Balneum, or into warm ashes for some dayes, and the spirit of wine in the mean time will be coloured with a fair red, which you must pour off and then pour on other fresh spirit and set it in a warm place for to be dissolved, this being likewise coloured, put both the extracts together in a little glass body, and abstract the spirit of wine (in Balneo) from the Tincture, which will be a little in quantity, but of a high red colour and pleasant in taste. The remaining flores from which the Tincture is extracted, may be with water washed out of the glass, and then dryed if they are to be melted; and

they will yield a little pale gold, and the most part turneth into a brown glass, out of which perchance something else that is good may be made, but unknown to me as yet.

N. B. If you mix the *Aurum fulminans* with some salt nitre, before fulmination, then the flores will be the more soluble, so that they yield their Tincture sooner and more freely, than alone of themselves; and if you please, you may adde thereto thrice as much salt nitre, and so sublime them in flores, in the same manner, as shall be taught for the making of the flores of silver.

The use of the Tincture of Gold.

The extracted Tincture is one of the chiefest of those medicines, which comfort & cheer up the heart of man, renew and restore to youthfulness, and cleanse the impure blood in the whole body, whereby many horrible diseases, as the leprosie, the pox, and like may be rooted out.

But whether this Tincture by the help of fire may be further advanced into a fixed substance I do not know: for I have not proceeded further in it, than here is mentioned.

Of the flores of silver and of its medicine.

Having promised in the first part of this book (when I was describing the preparation of flores out of Metals) to teach in the second part to make the flores of gold and silver, those of gold being dispatcht; there followeth now in order after the gold, to speak also of silver and of its preparation, which is to be thus performed.

Take of thin laminated or small granulated fine

silver as much as you please, put it into a little separating glass body, and pour upon it twice as much in weight of rectified spirit of salt nitre, and the spirit of salt nitre will presently begin to work upon the silver and to dissolve it. But when it will not dissolve any more in the cold, then you must put the glass body into warm sand or ashes, and the water will presently begin to work again; let the glass stand in the warm ashes, until all the silver be dissolved. Then put the solution out of the little glass body, into another such as is cut off at the top, and put on a little head or Limbeck, and in sand abstract the moity of the spirit of salt nitre from the dissolved silver; then let the glass body remain in the sand till it be cool; after take it out, and let it rest for a day and a night, and the silver will turn into white foliated crystals, from which you must pour off the remaining solution which is not turned; and from thence abstract again the moity of the spirit, and let it shoot or turn in a cold place; and this abstracting and crystallising you are to reiterate, until almost all the silver is turned to Crystals; which you must take out and lay upon filtring paper to dry, and so keep it for such further use, as hereafter shall be taught. The remaining solution, which is not crystallised, you may in a copper vessel by adding of sweet water thereto, precipitate over the fire into a calx, and then edulcorate and dry it, and keep it for other use, or else melt it again into a body. Or else you may precipitate the same with salt water, and so edulcorate and dry it; and you will have a calx, which doth melt by a gentle fire, and is of a special nature, and in the spirit of urin, of salt Armoniack, of Harts-horn, of Amber, of Soot, and of hair it doth easily dissolve; and it may be prepared or turned into good medicines, as shortly in our treating of the

spirit of urin shall be taught. Or else, you may choose not to precipitate the remaining solution of silver, but with the spirit of urin to extract an excellent Tincture, as hereafter shall be taught.

Of the use of the crystals of silver.

These crystals may safely be used in Physick alone by themselves 3, 6, 9, 12. graines thereof being mixed with a little sugar, or else made up into pills; they do purge very gently and without danger; but by reason of their bitterness they are somewhat untoothsome to take; also, if they be not made up into pills, they colour the lips, tongue and mouth quite black (but the reason of that blackness belongeth not to this place to treat of, but shall by and by follow hereafter). Also if they touch metals, as Silver, Copper and Tin, they make them black and ugly, and therefore they are not much used. But if you put into the solution of silver (before it be reduced into Crystals) half as much quicksilver as there was of the silver, and so dissolve them together and afterwards let them shoot together, there will come forth very fair little square stones like unto Allome, which do not melt in the air, as the former foliated ones use to do; neither are so bitter, and they purge also quicker and better, than those that are made only of silver.

How to sublime the Crystals of silver into flores, and then to make a good Medicine of the flores.

Take of the foliated Crystals of Silver as many as you please, and upon a grinding stone made warm first, grind as much purified and well dryed salt nitre amongst it, then put into your Iron distilling vessel (to the pipe whereof there is to be applyed and luted a great receiver) coles made into powder two inches

high, and make a fire under it, that the vessel every where together with the coles that are in it, become red hot. Then take off the lid, and with a ladle throw in at once of your Crystals of silver ʒ i. more or less, according as you think that your receiver in regard of its bigness is able to bear. This done, presently put on the lid, and the salt nitre together with the crystals of silver will be kindled by the coles that lye on the bottom of the vessel, and there will come forth a white silver fume through the pipe into the receiver, and after a while when the cloud is vanished in the receiver, cast in more, and continue this so long, and until all your prepared silver is cast in; then let it cool, and take off the receiver, and pour into it good Alcolized spirit of wine, and wash the flores with it out of the receiver, and proceed further with them, as above you have been taught to proceed with the gold, and you will get a greenish liquor, which is very good for the brain.

Take the coles out of the distilling vessel, and make them into fine powder, and wash them out with water, to the end that the light cole-dust may be got from it, and you will find much silver dust (or a great many little silver grains) which the salt nitre could not force over, which you may reduce, for it will be good silver.

There may also be made a very good medicine out of the crystals of silver, which will be little inferior to the former, whereby the diseases and infirmities of the brain may be very well remedied, which is done thus.

How to make a green oyl out of Silver.

Pour upon Crystals of silver twice or thrice as much (in weight) of the strongest spirit of Salt Armoniack,

put it in a glass with a long neck well closed, into a very gentle warmth for the space of 8. or 14. days in digestion, and the spirit of salt Armoniack will be tinged with a very fair blew colour from the silver, then pour it off, and filtre it through brown paper, and then put it in a little glass retort or glass body, and abstract in Balneo by a gentle fire, almost all the spirit of salt Armoniack (which is still good for use) and there will remain in the bottom a grass-green Liquor, which is to be kept for a Medicine.

But in case that you should miss, and abstract too much of the spirit from the Tincture of silver, so that the Tincture be quite dry and turned to a green Salt, then you must pour upon it again as much of the spirit of Salt Armoniack, as will dissolve the green salt again to a green Liquor, but if you desire to have the Tincture purer yet, then abstract all moistness from it, to a stony dryness: upon which you must pour good spirit of Wine, which will quickly dissolve the stone, and then filtre it, and there will remain feces, and the Tincture will be fairer: from which you must abstract most of the spirit of wine, and the Tincture will be so much the higher in vertue. But if you please, you may distil that green salt or stone (before it be extracted again with that spirit of wine) in a little glass retort, and you will get a subtile spirit and a sharp oyl, and in the bottom of the retort there remaineth a very fusile silver which could not come over.

It is to be admired, that when you pour spirit of salt Armoniack, or spirit of wine upon that stone, for to dissolve it, that the glass comes to be so cold by it, that you hardly are able to endure it in your hand, which coldness in my opinion cometh from the silver (being so well unlockt) which naturally is cold.

The Use of the green Liquor in Alchymy, and for Mechanical Operations.

This green Liquor serveth not only for a medicine, but also for other Chymical operations (for both Copper and glass may be easily and very fairly silvered over therewith) very useful for those that are curious and love to make a shew with fair houshold-stuff; for if you get dishes, trencher-plates, salters, cups and other vessels made of glass, after the same fashion as those of silver use to be made, you may very easily and without any considerable charge silver them over therewith within and without, so that by the eye they cannot be discerned from true silver plate.

Besides the above-related good Medicines, there may be made another and especial good one out of the crystals of silver, *viz.* dissolving and digesting them (for a space of time) with the universal water, which hath been distilled by nature it self; and is known to every body: and after its digesting for a short time, and change into several colours, there will be found a pleasant essence, which is not so bitter as the above-described green liquor, which is not brought yet by heat to ripeness and maturation.

N. B. In this sweet universal Menstruum, may also all other metals by a small heat and the digestion of a long time be ripened and fitted for Medicines (having first been reduced into their vitriols and salts) and then they are no more dead bodies, but by this preparation have recovered a new Life, and are no more the metals of the covetous, but may be called the metals of the Philosophers, and of the Physicians.

Besides Physick or physical use.

Lastly, there may be many pretty things more effected (besides the medicinal use) by means of the Crystals of silver, *viz.* when you dissolve them in ordinary sweet rain water, you may dye beards, hair, skin, and nails of men or beasts into carnation or pink red, brown and black, according as you have put more or less thereof in the water; or else, according as the hair was more or less times wetted therewith, whereby the aspect of Man and Beast (which sometimes in several occasions may not be contemned) is changed, so that they cannot be known.

This colouring or dye may be also performed with Lead or Mercury no less than with silver, but otherwise prepared, whereof in the fourth part.

Now I have taught how to make flores and tinctures of gold and silver by help of the acid spirit of Nitre. There may be many other medicines taught to be made out of them, but in regard that they belong not to this place, they shall be reserved for other places of this second, and also for the other following parts.

As by the help of the spirit of Nitre, good Medicines may be made out of gold and silver, so the like may be done out of other inferiour metals. But in regard that their description is fitter for other places of this Book, I omit them here. Yet nevertheless, I thought good to describe one preparation of every metal; after Silver therefore followeth now Copper.

A medicine out of Copper externally to be used.

Dissolve burnt plates of Copper in spirit of salt, and abstract the spirit again from thence to a dryness, but not too hard, and there will a green mass remain

behind, which you may cast in by little and little, and so distil it, as of silver hath been taught. It doth yield a strong and powerful spirit, and flores also for outward use in putrid wounds, to lay a good ground thereby for the healing.

A medicine out of Iron or Steel.

In the same manner you may proceed with iron and steel, and there will remain behind a good crocus of a great stipticity or astringency, especially out of iron or steel, and may with good success be mixed with oyntments and plaisters.

Of Tin and Lead.

If Tin or Lead be dissolved therein, after the abstracting of part of the spirit, they will shoot into clear and sweet crystals. But Tin is not so easily dissolved as Lead; both may safely be used for medicines. Also there may be Spirits and flores got out of them by distilling. The rehearsing of the Preparation is needless, for what for the preparing of silver hath been taught, is to be understood also of other metals.

The use of the Crystals of Lead and Tin.

The Crystals of Lead are admirably good to be used in the plague for to provoke sweating and expel the venome out of the body; they may also with credit be used in the bloody flux. Externally dissolved in water, and clothes dipt therein and applied, they excellently cool and quench all inflammations, in what part of the body soever they do befal. Likewise the spirit thereof used *per se* (and the flores mixed among oyntments) do their part sufficiently.

But the crystals of Tin do not prove altogether so quick in operation, though they do act their part also, and they are more pleasant than those that are made of Lead; for in Tin there is found a pure sulphur of gold; but in Lead a white sulphur of silver, as is proved in my *Treatise of the generation and nature of Metals*.

Of Mercury.

When you dissolve common Mercury in rectified spirit of Nitre, and abstract the spirit from it again, then there will remain behind a fair red glistering precipitate; but when the spirit is not rectified, it will not be so fair, because that the impurity of the spirit remains with the Mercury and pollutes it. This calcinated Mercury is called by some *Mercurius præcipitatus*, and by others *Turbith minerale*, wherewith the Surgeons, and sometimes other unskilful Physicians do cure the Pox; they give at once 6, 8, 10. grains, (more or less) according to its preparation and force in operation to the patient; for if the spirit be not too much abstracted from it, it worketh much stronger, than when by a strong fire it is quite separated from it; for the spirits that remain with the Mercury make it quick and active, which else without the spirits would not be such.

The other metals also, if they be not first made soluble by salts or spirits, can perform either none or but very small operation, unless it be Zink or Iron, which being easily soluble, are able to work without any foregoing dissolution, as hath been shewn above, when we treated of the oyl of vitriol. But that the sharp spirits are the cause of that operation, may hence be perceived, and made manifest; that although you take ʒ ss. of quick-silver and pour it

down into the stomach, yet it would run out again beneath, as above it was poured in. But if it be prepared with spirits or salts, then but few grains of it will work strongly, and the more it is made soluble, the stronger it worketh; as you may see when it is sublimed from salt and vitriol, that it groweth so strong thereby, that one grain doth work more than eight or ten grains of Turbith Mineral, and three or four grains thereof would kill a man, by reason of its mighty strength. Also it worketh extreamly, and much more than the sublimate, when it is dissolved in spirit of Nitre and crystalized, so that you cannot well take it upon your tongue without danger. Which some perceiving, evaporate the *Aqua fortis* by a gentle heat from it, so that the *Mercurius* remained yellow, which in a smaller dose wrought more than the red, from which the spirits were quite evaporated. And they used it only externally, strewing it into impure sores, for to corrode or fret or away the proud flesh, not without great pain to the patient: but also without distinction of young or old gave it inwardly for to purge; which is one of the most hurtful Purges that can be used. For this evil guest, however he be prepared, cannot leave his tricks, unless he be reduced into such a substance, as that it never can be brought back to a running Mercury, for then much good can be done in physick without any hurt or prejudice to the health of man, whereof perchance something more shall be said in another place.

I cannot omit for the benefit of young innocent Children, to discover a great abuse. For it is grown very common almost among all that deal in physick, that as soon as a little child is not well before they know whether it will be troubled with worms, or with any thing else, they presently fall upon

Mercury, supposing that in regard it hath no taste, it is so much the better for to get the Children to take it for to *kill* the Worms.

But those men do not know the hurtful nature of it, which it doth shew against the sinews and Nerves: For some are of opinion, that if they know to prepare Mercury so, that it can be given in a greater dose (as is to be seen in sublimed *Mercurius dulcis*) that then it is excellently prepared: but they are in a great errour, and it were much better, it were not so well prepared, that the less hurt might be done to Man, in regard that then they durst not give it in so great a dose. For if that which is prepared with *Aqua fortis* or spirit of salt nitre be used in the pox to men that are advanced in years, it cannot do so much hurt, because it is given in a small dose, and doth work with them, whereby nature gets help for to overcome and expel that hurtful venome, and its malignity is abated by the strong salivation, which provident nature hath planted in it, so that not so much mischief can come by it, as by *Mercurius dulcis*, whereof is given to little weak Children from ten to thirty grains at once, which commonly (unless they be of a strong nature, and do grow it out) doth cause a weakness and lameness in their limbs, so that (if they do not come to be quite lame at last) they have a long time to struggle withal, till they overcome it.

In like manner those also do err, which do shake Mercury in water or beer so long, until the water come to be gray-coloured, and so give that water or beer to little children to drink for the Worms, pretending that they do not give the substance or body of Mercury, but only its vertue. But this gross Preparation is no better than if they had ministred the running Mercury it self. Neither have I ever seen

that the use of *Mercurius dulcis*, or of the gray coloured water was seconded with good success in killing of the Worms. But it is credible, that it may be done by yellow or red precipitate, in regard of its strong operation. But who would be such an Enemy to his Child, as to plague and torture it with such a hurtful and murthering medicine; especially there being other medicines to be had, which do no harm to the children, as is to be found in iron or steel, and the sweet oyl of vitriol.

And so much of the abuse of Mercury: I hope it will be a good warning unto many, so that they will not so easily billet such a tyrannical guest in any ones house, whereby the ruine thereof of necessity must follow. And that cure deserveth no praise at all, whereby one member is cured with the hurt of two or three other members. As we see by the Pox, when one infected member is cured by Mercury, and that but half, and not firm at all, that all the rest of the body is endangered thereby for the future. And therefore it would be much better that such crude horse-physick might be severed from good medicaments, and such used instead of them, as may firmly, safely, and without prejudice to other parts perform the cure, of which kind several are taught in this book. But in case that you have Patients, which have been spoiled by such an ill-prepared Mercury, then there is no better remedy to restore them, than by medicines made of metals, wherewith Mercury hath great affinity, as of gold and silver: for when they are often used, they attract the Mercury out of all the members, and carry it along with them out of the body, and so do rid the body thereof. But externally the precipitated Mercury may more safely be used, than internally, in case there be nothing else to be had, *viz.* to corrode or eat away the proud flesh

out of a wound. But if instead of it there should be used the corrosive oyl of Antimony, Vitriol, Allome or common salt it would be better, and the cure much the speedier; and it would be better yet, that in the beginning good medicaments were used to fresh wounds, and not by carelesness to reduce them to that ill condition, that afterwards by painful corrosives they must be taken away. But such a Mercury would serve best of all for souldiers, beggers, and children that go to school; for if it be strewed upon the head of children, or into their cloathes, no louse will abide there any longer. In which case Mercury must by his preparation not be made red, but onely yellow, and it must be used warily, and not be strewed on too thick, lest the flesh be corroded, which would be the occasion of great mischief.

Of Aqua fortis.

Out of Salt nitre and vitriol, taking of each a like quantity (or if the water is to be not altogether so strong) two parts of vitriol to one part of salt nitre, a water distilled is good to dissolve metals therewith, and to separate them from one another; as gold from silver, and silver from gold, which in the fourth part punctually shall be taught.

The *Aqua fortis* serveth also for many other Chymical operations to dissolve and fit metals thereby, that they may be reduced the easier into medicaments: but because the spirit of salt nitre and *Aqua fortis* are almost all one, and have like operations: for if the *Aqua fortis* be dephlegmed and rectified, you may perform the same operations with it, which possibly may be performed with the spirit of salt nitre; and on the other side the spirit of salt

nitre will do all that can be done with the *Aqua fortis*, whereof in the fourth Part shall be spoken more at large.

Now I know well that ignorant laborators (which do all their work according to custome, without diving any further into the Nature of things, will count me an Heretick (because I teach, that the *Aqua fortis* made of vitriol and salt nitre is of the same nature and condition with the spirit of salt nitre, which is made without vitriol) saying that the *Aqua fortis* doth partake likewise of the spirit of vitriol, because vitriol also is used in the preparation of it. To which I answer, that although vitriol be used in the preparation of it, yet for all that in the distilling, nothing or but very little of its spirit comes over with the spirit of salt nitre, and that by so small a heat it cannot rise so high, as the spirit of salt nitre doth: and the vitriol is added onely therefore unto the salt nitre that it may hinder its melting together, and so the more facilitate its going into a spirit. And the more to be convinced of this truth, the unbelieving may add to such spirit of salt nitre, as is made by it self, a little of oyl of vitriol likewise made by it self, and try to dissolve silver guilded with it, and he will find that his spirit of salt nitre by the spirit of vitriol is made unfit to make a seperation; for it preyeth notably upon the gold, which is not done by *Aqua fortis*.

Of the sulphurised spirit of salt nitre.

There may also be made a spirit of salt nitre with sulphur, which is still in use with many, *viz.* they take a strong earthen retort, which hath a pipe at the top, and fasten it into a furnace, and having put salt nitre into it, they let it melt, and then through the

pipe they throw peeces of sulphur of the bigness of a pea, one after another, which being kindled, together with the nitre doth yield a spirit called by some spirit of salt nitre, and by others oyl of sulphur, but falsely; for it is neither of both, in regard that metals cannot be dissolved therewith as they are done with other spirit of salt nitre or sulphur; neither is there any great use for it in physick, and if it were good for any Chymical operations, by the help of my distilling instrument might easily be made and in great quantity,

N. B. But if salt nitre be mixed with sulphur in due proportion, and in the first furnace be cast upon quick coles, then all will be burnt, and a strong spirit cometh over, whose vertue is needless here to describe; but more shall be mentioned of it in another place.

Of the Clissus.

Among the Physitians of this latter age, there is mention made of another spirit, which they make of Antimony, Sulphur, and salt nitre, a like quantity taken of each, which they call *Clissus*, and which they have in high esteem, and not without cause, because it can do much good, if it be well prepared.

The inventor, for the making thereof used a retort with a pipe, as was mentioned by the sulphurized spirit of salt nitre, through which pipe he threw in his mixture. And it is a good way if no better be known: but if the Author had known my invention and way of distilling, I doubt not but he would have set aside his, that hath a nose or pipe retort, and made use of mine.

The materials indeed are good, but not the weight

or proportion; for to what purpose so great a quantity of sulphur, it being not able to burn away all with so small a quantity of salt nitre. And if it doth not burn away, but only sublime & stop the neck of the retort, whereby the distillation is hindered, how can it then yield any vertue? Therefore you ought to take not so much sulphur, but only such a quantity as will serve to kindle the salt nitre, *viz.* to ℔ i. of salt nitre four drams of sulphur: but because Antimony also is one of the ingredients, which hath likewise much sulphur (for there is no Antimony so pure, but it containeth much combustible sulphur, as in the fourth part of this book shall be proved:) therefore it is needless to add so much sulphur unto Antimony, to make it burn, because it hath enough of it self. And therefore I will set down my composition, which I found to be better than the first.

Take Antimony ℔ i. salt nitre ℔ ij. sulphur ʒ iij. the materials must be made into small powder and well mixed, and at once cast in ʒ ij. thereof, and there will come over a sulphureous acid spirit of Antimony, which will mix it self with the water, which hath been put before in the receiver; which after the distillation is finished must be taken out and kept close for its use. It is a very good diaphoretick (or sweat provoking) medicine especially in feavers, the plague, epilepsie, and all other diseases, whose cure must be performed by sweating. The *Caput Mortuum* may be sublimed into flores in that furnace, which is described in the first part.

Of the Tartarised spirit of nitre.

In the very same manner there may also be distilled a

good sweat-provoking spirit out of salt nitre and Tartar, a like quantity taken of each, which is very good to be used in the plague and malignant feavers.

The *Caput Mortuum* is a good melting powder for to reduce the calxes of metals therewith; or else you may let it dissolve in a moist place to oyl of Tartar.

Of the Tartarised spirit of Antimony.

A much better spirit yet may be made of Tartar, salt nitre, and Antimony, a like quantity being taken of each and made into fine powder, and mixed well together, which though it be not so pleasant to take, is therefore not to be despised. For not only in the plague and feavers, but also in all obstructions and corruptions of blood it may be used with admiration of its speedy help.

The *Caput Mortuum* may be taken out, and melted in a crucible, and it will yield a *Regulus*, the use whereof is described in the fourth part. Out of the scoria or dross a red Tincture may be extracted with spirit of wine, which is very useful in many diseases. But before you extract with spirit of wine, you may get a red lixivium out of it with sweet water, which lixivium may be used externally for to mend the faults of the skin and to free it from scabbiness.

Upon this lixivium if you pour Vinegar or any other acid spirit, there will precipitate a red powder, which if it be edulcorated and dryed may be used in physick. It is called by some sulphur *auratum diaphoreticum*: but it is no Diaphoretick, but maketh strong vomits, and so in case of necessity, when you have no better medicine at hand, it may be used for a vomitory from 6, 7, 9, 10, 15.

Also out of the scoria there may be extracted a fair

Sulphur with the spirit of urin and distilled over the Limbeck, which is very good for all diseases of the lungs.

Of Stone-coles.

If you mix stone-coales with a like quantity of salt nitre, and distill them, you will get an admirable spirit and good to be used outwardly; for it cleanseth and consolidateth wounds exceedingly, and there will also come over a metallical vertue in the form of a red powder, which must be separated from the spirit, and kept for its use. But if you cast in stone-coles alone by themselves, and distill them, there will come over not only a sharp spirit, but also a hot and blood red oyl, which doth powerfully dry and heal all running ulcers; especially it will heal a scald head better than any other medicine, and it doth consume also all moist and spongious excrescencies in the skin, where ever they be: but if you sublime stone-coles in the furnace described in the first part, there comes over, an acid metallical spirit, and a great deal of black light flores, which suddenly stanch bleeding, and used in plaisters, are as good as other metallical flores.

Of the Sulphureous spirit of salt nitre or Aqua fortis.

If you take one part of sulphur, two parts of nitre, and three parts of vitriol, and distill them, you will get a graduating *Aqua fortis*, which smelleth strongly of sulphur; for the sulphur is made volatile by the salt nitre and vitriol. It is better for separating of metals, than the common *Aqua fortis*.

If silver be put in, it groweth black, but not fixed; some of it poured into a solution of silver a great deal of black calx will precipitate, but doth not abide

the tryal. You may also abstract a strong *sulphureous* volatile spirit from it, which hath like vertue as well internally as externally for bathes, and may be used like unto a volatile spirit of Vitriol or Allome.

Of the Nitrous spirit of Arsenick.

If you take white Arsenick and pure salt nitre of each a like quantity ground into fine powder, and distill them, you will get a blew spirit, which is very strong, but no water must be put into the receiver, else it would turn white, for the Arsenick, from which the blew cometh, is precipitated by the water. This spirit dissolveth and graduateth copper as white as silver, and maketh it malleable but not fixed. The remaining *Caput Mortuum* maketh the copper white, if it be cemented therewith, but very brittle and unmalleable, but how to get good silver out of Asenick and with profit, you shall find in the fourth part. In physick the blew spirit serveth for all corroding cancrous sores, which if they be anointed therewith, will be killed thereby, and made fit for healing.

To make a spirit of Sulphur, crude Tartar and Salt nitre.

If you grind together one part of Sulphur, two parts of Crude Tartar, and four parts of salt nitre, and distill it Philosopher-like, you will get a most admirable spirit, which can play his part both in Physick and Alchymy. I will not advise any body to distill it in a retort; for this mixture, if it groweth warm from beneath, it fulminateth like Gunpowder; but if it be kindled from above, it doth not fulminate, but onely burneth away like a quick fire; metals may be melted and reduced thereby.

To make a spirit out of Salt of Tartar, Sulphur, and Salt-nitre.

If you take one part of salt of Tartar, and one part and a half of Sulphur, with three parts of salt nitre, and grind them together, you will have a commposition, which fulminateth like *Aurum fulminans*, and the same also (after the same manner as above hath been taught with gold) may be distilled into flores and spirits, which are not without special Vertue and Operation. For the corruption of one thing is the generation of another.

How to make a spirit of saw-dust, sulphur and salt nitre.

If you make a mixture of one part of Saw-dust made of Tilia or Linden-wood, and two parts of good sulphur, and nine parts of purified and well dryed salt nitre, and cast it in by little and little, there will come over an acid spirit, which may be used outwardly, for to cleanse wounds that are unclean. But if you mix with this composition minerals or metals made into fine powder, and then cast it in and distill it, there will come not only a powerful metallical spirit, but also a good quantity of flores, according to the nature of the mineral, which are of no small vertue: for the minerals and metals are by this quick fire destroyed and reduced to a better condition, whereof many things might be written: but it is not good to reveal all things. Consider this sentence of the Philosophers. *It is impossible to destroy without a flame, The combustible Sulphur of the Calx, which the digged Mine doth doe.*

Also fusible minerals and metals may not only be melted, therewith, but also cupellated in a moment upon a Table in the hand or in a nut-shell; whereby singular proofs of oares and metals may be made,

and much better, than upon a Cupel, whereof further in the fourth part of this book. Here is opened unto us a gate to high things; if entrance be granted unto us, we shall need no more books to look for the Art in them.

To make metallical spirits and flores by the help of salt-nitre and linnen cloth.

If metals be dissolved in their appropriated Menstruums, and in the solution (wherein a due proportion of salt nitre must be dissolved) fine linnen rags be dipt and dryed, you have a prepared metal, which may be kindled, and (as it was mentioned above concerning the saw-dust) through the burning away and consuming of their superfluous sulphur, the mercurial substance of the metal is manifested. And after the distillation is ended, you will find a singular purified calx, which by rubbing coloureth other metals, as that of gold doth guild silver, that of silver silvereth over copper, and copper calx maketh iron look like copper, *&c.* which colouring though it cannot bring any great profit, yet at least for to shew the possibility, I thought it not amiss to describe it; and perchance something more may be hid in it, which is not given to every one to know.

Of Gun-powder.

Of this mischievous composition and diabolical abuse of Gunpowder much might be written: but because this present world taketh only delight in shedding innocent blood, and cannot endure that unrighteous things should be reproved, & good things praised, therefore it is best to be silent, and to let every one answer for himself, when the time cometh that we shall give an account of our stewardship, which

perhaps is not far off; and then there will be made a separation of good and bad, by him that tryeth the heart, even as gold is refind in the fire from its dross. And then it will be seen what Christians we have been. We do all bear the name, but do not approve our selves to be such by our works; every one thinketh himself better than others, and for a words sake which one understandeth otherwise, or takes in another sense than the other (and though it be no point, whereon salvation doth depend) one curseth and condemneth another and persecuteth one another unto death, which Christ never taught us to do, but rather did earnestly command us that we should love one another, reward evil with good, and not good with evil, as now a dayes every where they use to do; every one standeth upon his reputation, but the honor of God and his command are in no repute, but are trampled under foot, and Lucifers pride, vain ambition, and Pharisaical hypocrisie or shew of holiness, hath so far got the upper-hand with the learned, that none will leave his contumacy or stubbornness, or recede a little from his opinion, although the whole world should be turned upside down thereby. Are not these fine Christians? By their fruit you shall know them, and not by their words. Woolves are now clothed with sheeps skins, so that none of them almost are to be found, and yet the deeds and works of Woolves are every where extant.

All good manners are turned into bad, women turn men, and men women in their fashion and behaviour, contrary to the institution and ordinance of God and Nature. In brief, the world goeth on crutches. If *Heraclitus* and *Democritus* should now behold this present world, they would find exceeding great cause for their lamenting and laughing at it. And therefore it is no marvel, that God sent such a

terrible scourge as gun-powder is upon us; and it is credible, that if this do not cause our amendment, that a worse will follow, *viz.* thunder and lightning falling down from Heaven, whereby the world shall be turned upside down for to make an end of all pride, self-love, ambition, deceit and vanity. For which the whole Creation doth wait, fervently desiring to be delivered from the bondage thereof.

Now this preparation, which is the most hurtful poyson, a terror unto all the living, is nothing else but a *fulmen terrestre* denouncing unto us the wrath and coming of the Lord. For Christ to judge the world is to come with thundering and lightning: and this earthly thunder perchance is given us for to put us in mind and fear of that which is to come, but this is not so much as thought on by men, who prepare it only for to plague and destroy mankind therewith in a most cruel and abominable manner, as every one knoweth.

For none can deny but that there is no nimbler poyson, than this gunpowder. It is written of the Basiliske, that he killeth man only by his look, which a man may avoid, and there are but few (if any at all) of them found: but this poyson is now prepared and found every where.

How often doth it fall out, that a place wherein this powder is kept is stricken with thunder as with its like, in so much that all things above it are in a moment destroyed, and carryed up into the air? Also in sieges, when an Ordnance is discharged, or Mines blown up, all whom it lays hold on, are suddenly killed, and most miserably destroyed. What nimbler poyson then could there be invented? I believe there is none, who will not acknowledge it to be such.

And seeing that the ancient Philosophers and

Chymists were always of opinion, that the greater the poyson is, the better medicine may be made of it, after it is freed from the poyson, which with us their posterity is proved true by many experiences; as we see by Antimony, Arsenick, Mercury, and the like minerals, which without preparation are meer poyson, but by due preparation may be turned into the best and most effectual medicaments, which though not every one can comprehend or believe, yet Chymists know it to be true, and the doing of it is no new thing to them. And because I treat in this second part of medicinal spirits, and other good medicaments, and finding that this which can be made out of gunpowder, is none of the least, I would not omit in some measure, and as far as lawfully may be done, to set down its preparation: which is thus performed.

How to make a spirit of Gunpowder.

Your distilling vessel being made warm, and a great receiver with sweet water in it, being applyed to it without luting, put a dish with gunpowder, containing about 12. or 15. grains a piece, one after another into it; in the same manner as above was taught to do with gold. For if you should put in too much of it at once, it would cause too much wind and break the receiver.

As soon as you have conveighed it into the vessel, shut the door, and the gunpowder will kindle, and give a blast that it maketh the receiver stir, and a white mist or steam will come over into the receiver. As soon as the powder is burnt, you may cast in more before the mist is settled, because else the distilling of it would cost too much time, and so you may continue to do until you have spirit enough. Then let

the fire go out, and the furnace grow cool, and then take off the receiver, pour the spirit with the water that was poured in before (the flores being first every where washed off with it) out of the receiver into a glass body, and rectifie it in a B. through a limbeck, and there will come over a muddy water, tasting and smelling of sulphur: which you must keep. In the glass body you will find a white salt, which you are to keep likewise. Take out the *Caput Mortuum*, which remained in the distilling vessel, and looks like gray salt, calcine it in a covered crucible, that it turn white, but not that it melt; and upon this burnt or calcined salt, pour your stinking water, which came over through the limbeck, and dissolve the calcined white salt with it, and the feces which will not dissolve cast away. Filtre the solution, and pour it upon the white salt, which remained in the glass body, from which the sulphureous spirit was abstracted before, and put the glass body (with a limbeck luted upon it) into sand, and abstract the sulphureous water from it, which will be yellowish, and smell more of sulphur than it did before. This water if it be abstracted from the salt several times, will turn white, almost like unto milk, and tast no more of sulphur, but be pleasant and sweet. It is very good for the diseases of the lungs. Also it doth guild silver, being anointed therewith, although not firmly, and by digestion it may be ripened and reduced into a better medicine.

The salt which remained in the glass body, urge with a strong fire, such as will make the sand, wherein the glass standeth red hot, and there will sublime a white salt into the limbeck, in taste almost like unto salt Armoniack, but in the midst of the glass body, you will find another, which is yellowish, of a mineral taste and very hot upon the tongue.

The sublimed salts, as well the white which did ascend into the limbeck, as the yellow, which remained in the glass body are good to be used in the plague, malignant feavers and other diseases, where sweating is required; for they do mightily provoke sweating, they comfort and do cleanse the stomach, and cause sometimes gentle stools.

But what further may be done in Physick with it, I do not know yet.

In Alchymy it is also of use, which doth not belong to this place. Upon the remaining salt which did not sublime you may pour rain water, and dissolve it there in the glass body, (if it be whole still) else if it be broken, you may take out the salt dry, and dissolve and filtre and coagulate it again, and there will be separated a great deal of fæces. This purified salt, which will look yellowish, melt in a covered crucible, and it will turn quite blood red, and as hot as fire upon the tongue, which with fresh water you must dissolve again, and then filtre and coagulate; by which operation it will be made pure and clear, and the solution is quite green before it be coagulated, and as fiery as the red salt was before its dissolution.

This grass green solution being coagulated again into a red fiery salt, may be melted again in a clean and strong crucible, and it will be much more red and fiery.

N. B. And it is to be admired that in the melting of it many fire sparks do fly from it, which do not kindle or take fire, as other sparks of coals or wood use to do. This well purified red salt being laid in a cold and moist place, will dissolve into a blood red oyl, which in digestion dissolveth gold and leaveth the silver: this solution may be coagulated, and kept for use in Alchimy.

There may also a pretious Tincture be extracted out of it with alcolized spirit of wine, which Tincture guildeth silver, but not firmly.

And as for use in Physick, it ought to be kept as a great Treasure. But if the red fiery salt be extracted with spirit of wine before gold be dissolved therewith, it will yield likewise a fair red Tincture, but not so effectual in Physick as that unto which gold is joyned. And this Tincture can also further be used in Alchymy, which belongeth not hither, because we only speak of medicaments.

Of the use of the Medicine or Tincture made of Gunpowder.

This Tincture whether with or without gold, made out of the red salt, is one of the chiefest that I know to make, if you go but rightly to work, and prepare it well; for it purifieth and cleanseth the blood mightily, and provoketh also powerfully sweat and urine; so that it may safely and with great benefit be used in the Plague, Feavers, Epilepsy, Scurvy, in *Melancholia Hypochondriaca*, in the Gout, Stone, and the several kinds of them; as also in all obstructions of the Spleen and Liver, and in all diseases of the Lungs, and it is to be admire that of such a hurtful thing such a good medicine can be prepared. Therefore it would be much better to prepare good medicaments of it, to restore the poor diseased to health therewith, than to destroy with it those that are whole and sound.

I know a Chymist, that spent much time and cost to search this poysonous dragon, thinking to make the universal medicine or stone of the ancient Philosophers out of it. Especially because he saw, that so many strange changes of colours appeared,

whereof mention is made by the Philosophers when they discribe their medicine and the preparation thereof.

The Dragons blood, Virgins milk, Green and Red Lyon, Black blacker than Black, White whiter than White and the like, more needless here to relate, which easily may perswade a credulous man as it hapned also unto him. But afterward he found, that this subject in which he put so much confidence, was leprous and not pure enough, and that it is impossible to make that tingent stone of it, for to exalt men and metals, and so was glad to be contented with a good particular medicine and to commit the rest unto God.

And so much of that poysonous dragon, gunpowder: but that there is another and more purer dragon, whereof the Philosophers so often made mention, I do not deny; for nature is mighty rich, and could reveal to us many arcana by Gods permission: But because we look only for great honor and riches, and neglect the poor, there is good reason why such things remain hidden from wicked and ungodly men.

To make spirits and flores of Nitre and Coals.

If you distill Nitre (well purified from its superfluous salt) mixed with good coals, the Egyptian Sun bird doth burn away, and out of it doth sweat a singular water, useful for men and metals. Its burnt ashes are like unto calcined Tartar, and for the purging of metals not to be despised.

To make flores and spirits of flints, crystals or sand, by adding of coals and salt nitre to them.

Take one part of flints or sand, and three parts of Linden coals, with six parts of good salt nitre mixed well together, and cast of it in, and the combustible sulphur of the flints will be kindled by the piercing and vehement fire of the salt nitre, and maketh a separation, carrying over with it part thereof, which it turneth into spirits and flores, which must be separated by filtring. The spirit tasteth as if it had been made of salt of Tartar and flints, and is of the same nature and condition; and the remaining *Caput Mortuum* also yieldeth such an oyl or liquor in all like unto that, and therefore its condition is not described here, but you may find it where I shall treat of the spirit made of salt of tartar by adding of flints.

To make a spirit and oyl out of Talck with salt nitre.

Take one part of Talck made into fine powder, and three parts of Linden-coals, mixe them with five or six parts of good salt nitre, cast in of that mixture one spoonful after another, and there will come over a spirit and a few flores, which must be separated as hath been taught above concerning flints.

The spirit is not unlike unto the spirit of sand: the *Caput Mortuum*, which looks greyish, must be well calcined in a crucible, so that it melt, and then pour it out, and it will yield a white transparent Mass, like as flints and crystals do, which in a cold moist cellar will turn to a thick liquor, fatter in the handling than the oyl of sand. It is something sharp like unto oyl of Tartar; it cleanseth the Skin, Hair and Nails, and makes them white; the spirit may be used inwardly for to provoke sweat and urine: externally used, it cleanseth wounds, and healeth all manner of scabs in the body out of hand. What further may be done with it, I do not know yet: But how to bring Talck,

pebles, and the like stony things to that pass, that they may be dissolved with spirit of wine and reduced into good medicaments shall be taught in the fourth part.

To make a spirit, flores, and oyl out of Tin.

If you mix two parts of the filings of Tin, with one part of good salt nitre, and cast it in, as you were taught to do with other things, then the sulphur of Tin will kindle the salt nitre, and make a flame, as if it were done with common sulphur, whereby a separation is made, so that one part of the Tin cometh over in flores and spirit, and the rest stayeth behind, which if it be taken out, some of it in a moist place will turn into a liquor or oyl, which externally may be used with good success in all ulcers for to cleanse them. It hath also the vertue, if it be pertinently applyed to graduate and exalt wonderfully all the colours of vegetables and animals, which would be useful for dyers. The spirit of it mightily provoketh sweating: the flores being edulcorated and used in plaisters, do dry and heal very speedily.

To make a spirit, flores and a liquor out of Zinck.

In like manner as hath been taught with Tin, you may also proceed with Zinck, and it will yield a good quantity of flores, and also a spirit and oyl, almost of the same vertues with those made of Tin: and these flores corrected with salt nitre, are better than those which are taught to be made by themselves in the first part of the book.

To make a spirit, flores and oyl of Lapis Calaminaris.

Mix two parts of salt nitre with one part of *lapis calaminaris* and cast it in, and it will yield a sharp spirit very useful for separating of metals, and there will come over also a few yellow flores. The rest remaining behind is a dark green Mass very fiery upon the tongue, like salt of Tartar, and if it be dissolved with rain water, yieldeth a grass green solution, which being not presently coagulated into salt, the green separateth it self from the fixed salt nitre, and there falleth to the bottom a fine red powder, and if it be edulcorated and dryed, and given from one grain to ten or twelve it causeth gentle stools and easy vomits, better than prepared Antimony; for *lapis calaminaris* and Zinck are of the nature of Gold, as in the fourth part shall be proved: the white *lixivium* or lye, from which the green is precipitated, may be coagulated into white salt, like unto salt of Tartar; but if you coagulate the green solution, before the green be separated from the salt nitre, then you will get a very fair green salt, high in colour and much more fiery than salt of Tartar, whereby special things may be done in Alchymy, which doth not belong hither. And if you desire to make such a green salt for to use it in Alchymy, you need not take so much pains, as first to distil a spirit out of the mixture, but take three or four parts of good salt nitre, and mix it with one part of *lapis calaminaris*, and let this mixture boyl together in a wind furnace, till the salt nitre be coloured green by the *lapis calaminaris*, then pour it out and separate the green goldish salt from it, and make such good use of it as you think fit.

But if you will extract a good Tincture and medicine, make it into powder, and extract it with spirit of wine, and it will yield a blood red Tincture, both in Physick and Alchymy of good use.

Further you are to take notice, that among all metals and minerals, which I know (except gold and silver) there is none found, out of which can be extracted a greenness which is of fire-proof, but only out of *lapis calaminaris*, which deserves to be well considered and further thought upon.

To make a spirit of salt nitre, sulphur and common salt.

Take one part of salt, two parts of sulphur, and four parts of salt nitre, grind all together, and cast in one spoonful after another to distil, and it will yield a sharp yellow spirit, which if it be put among common water, so that the water be not made too sharp of it, it is a good bath, good for many diseases; especially it healeth all scabs very suddenly. The *Caput Mortuum* may also be dissolved in water and used among bathes, and it is good likewise, but the spirit is penetrating, and doth operate suddenly in shrinkings and other defects of the nerves; of such kind of bathes there shall be spoken more in the third part. Also the remaining fixed yellow salt is good to be used in Alchymy; for it graduateth silver by cementing.

To make a spirit, flores and oyl out of salt nitre and Regulus Martis.

Take one part of *Regulus Martis stellatus* (made of one part of Iron or Steel, and three parts of Antimony, whose preparation is described in the fourth part) and three parts of pure salt nitre, mix and grind all together, and cast it in by little and little to distil, and there will come over a spirit together with a white sublimate, which must be separated with water, as hath been taught above with other flores, and both the spirit and the flores are good to

provoke sweat. The remaining *Caput Mortuum*, (as they usually call it) is not dead, but full of life and vertue, whereby much good may be done both in Physick and Alchymy, as followeth. The remaining Mass, which looks white, and is very sharp and fiery (if the *Regulus* have been pure, if not, then it will look yellowish) may be edulcorated with fresh water, and it will yield a *lixivium* or lye in all things like unto calcined Tartar, but sharper and purer, and may be used almost in all operations instead of salt of Tartar (but first the *Regulus Antimonii* must be precipitated from it by the help of water) and afterward it may be coagulated into salt and kept for its use; the edulcorated, as also that which was precipitated with water is a white and fine powder, useful in the plague, feavers, and other diseases to provoke sweating thereby, and may very safely be used, and although if it be given in a greater quantity than usual, it causes some vomits also, yet for all that it doth no hurt. It is easily taken because it hath no taste. It is given to children from 3, 4, to 12. grains: to elder folks from ℈ *ss.* to ʒ *ss.* they work successfully in all diseases, where sweating is needful. This *Antimonium Diaphoreticum*, may also be melted into glass, and so extracted and dissolved with spirit of salt, and it may be prepared into several good medicaments: and if all that which may be done with it, should be described at large, it would require too much time. The *lixivium*, if it be coagulated, hath wonderful vertues, so that if one should describe them, he would hardly be credited by any body, because it is not made of costly things; and truly the life of man is too short to find out by experience all that lies hid in it: and it would be but a laughing matter to a proud fool, if one should reveal it: therefore it is better to keep counsel, than

to sow strife. *Basilius Valentinus* in his Triumphant Chariot of Antimony, where he writeth of the signed star, hinted it sufficiently, but very few take notice of it. *Paracelsus* also, here and there in his books under an unknown name, makes frequent mention of it; but its true preparation and use, by reason of the unthankful was never described by the Philosophers, which for instruction of Good Honest Men we do here mention.

Before you edulcorate the *Regulus* (made by fulmination) you may extract of it a good medicinal Tincture with spirit of wine, and if you dissolve it with spirit of salt, there will shoot a white foliated Talck in all things like unto the Mineral Talck: whereof a liquor may be made, which coloureth the skin very white, but if this calx of Antimony, before it be extracted with spirit of wine or dissolved with spirit of salt be made into fine powder, and exposed to the moist air, it will dissolve into a fat liquor, which though it be something sharp, yet doth no hurt to the skin, if it be used with discretion, but rather cleanseth it more then any other thing, and so it doth likewise to the hair and nailes; but as soon as the liquor hath been applyed for that purpose, it must be washed off again with water, lest it do not onely take away the gross and unclean skin, but also work upon the tender white skin and do hurt, and therefore I give warning, that you use it discreetly: for according to the old proverb, you may misuse even that which else is good in it self. If you put some of it into warm water and bath your self in it, the gross skin will peal off all the body, so that you will almost seem to be another body. And this bath also is good for many diseases: for it openeth the pores mightily, and cleanseth all the blood in the body, by drawing many ill humors out of it, which

maketh a man light and strong, especially if he be purged first, before he useth the bath. It is also good for Melancholy, scurvy and leprosie, especially when the red Tincture drawn out of it with spirit of wine, be used besides. It is also good to be used in a foot bath for those that are troubled with corns and other excrescencies upon their feet, or with nailes that cut the flesh; for it softeneth them and makes them fit for cutting, and as tractable as wax. For there is nothing known under the Sun, which softneth more a hard skin, hair, nailes and other excrescencies, than this oyl. And this I did set down therefore, because I know, that many are so tormented therewith, that they cannot well endure their shoes upon their feet. But if you coagulate this oyl into salt, and melt it in a crucible, and powre it out into a flat brass bason, that it flow at large and may be broken, then you have the best Causticum, to open the skin withal where is need. If you dissolve crude Tartar with it and coagulate it again, you will get a salt which is used in many Chymical operations; and there may be extracted out of it a blood red Tincture with spirit of wine, which proveth very effectual against all obstructions.

Also every combustible sulphur may be easily dissolved with it, and used among bathes, it acteth his part admirably. If any oyl of spices be boyled therewith, then the oyl will dissolve in it, and they turn together to a balsome, which doth mingle it self with water, and is good to be taken inwardly for some infirmities: but women with child must not meddle with it, because it makes them miscarry. But after their delivery, it is good to expel after burthen and other reliques. But if you boyl *Oleum ligni Rhodii* with this liquor and rose water so long till the oyl do incorporate with the liquor and waters and then

separate the watery substance from it, you will get a sope as white as snow, which may be used for to wash the hands with it, and it doth smell very well. You may also wash the head with it; for it strengtheneth the brain and cleanseth the head and hair. This sope may be distilled, and it will yield a penetrating oyl, very good for the sinews and nerves.

Now as this liquor of *Regulus Antimonii* softneth the skin, nailes, hair, feathers, horns, and the like, and dissolveth them more than any thing in the world: In the like manner also it hath power to dissolve not only metals, but also the hardest stones, but not in that manner which is done by boyling, as was mentioned of sulphur, but after another way, which is not proper for this place. It sufficeth that I hinted it. The fiery fixed salt nitre may be dissolved with spirit of salt or vinegar, and sublimed into a *Terra foliata*. What further can be effected with it, doth not belong to this place, and perchance some where else more shall be spoken of it.

To distil a Butyrum out of Antimony, Salt and vitriol, like unto that, which is made out of Antimony and Mercury sublimate.

Take one part of crude Antimony, two parts of common salt, and four parts of vitriol calcined white, beat all to powder and mix them well, and so cast it in as you were taught to do with other materials, and there will come over a thick oyl of Antimony like butter, which may be rectified like any other oyl, that is made after the common way with Mercury sublimate, and is also the same with it in use, which use you may see in the first part: the same also may be made better and in a greater quantity in the furnace described in the first part, and also with less

coals and time by the help of the open fire, because it endureth greater heat than in the second furnace.

To distil Butyrum of Arsenick and Orpiment.

After the same manner as was taught with Antimony, there may also out of Arsenick and Auripigment together with salt and vitriol a thick oyl be distilled, which not only outwardly but also inwardly is safe to be used, and may be so corrected, that it shall be nothing at all inferior in vertue unto the *butyrum Antimonii*, but rather go beyond it: which perchance will seem impossible to many. But he that knows the nature and condition of minerals, will not be astonished at my words, but they will be to him as a light in a dark place.

To make a rare spirit of vitriol.

If common vitriol be dissolved in water, and you boyle granulated Zinck in it, all the metal and sulphur contained in the vitriol will precipitate on the Zinck, and the solution will turn white, the precipitated matter is nothing else, but iron, copper, and sulphur, which the salt of vitriol did contain, and now is drawn from it by the Zinck. The reason why the metal precipitateth out of the salt upon the Zinck, belongeth to the fourth part, where you will find it sufficiently explained; The white solution, from which the metallical matter is separated, must be coagulated to the dryness of salt, and so by it self a spirit distilled of it, which riseth easily, and is in taste and vertue not unlike unto common oyl of vitriol, but only that this is a little purer than the common.

Here perchance many may object: you take the green from the vitriol, which *Paracelsus* doth not

teach, but bids us to keep it. To which I answer, that I do not teach here to make the sweet red oyl of vitriol, whereof *Paracelsus* hath written, but the white acid oyl; which is as good, or rather much better than the common, which is made of the common impure vitriol. To what purpose is it, that you take green vitriol to distil, whereas the green doth not come over, and although that green should come over, why should that oyl be better than the white? for the green in the common vitriol is nothing else but copper and iron, which the salt water running through the passages of Metals did dissolve and take into it self, and as soon as such a green vitriol feeleth the fire, the green turneth into red, which is nothing else but a calcined iron or copper, which in the reducing by a strong fire and by melting is made manifest.

Paracelsus hath not taught us, that we should drive over the green by the force of the fire into a red and sweet oyl, but he hath shewed us an other way, which is found out by few men, whereof in the beginning of the second part already hath been made mention.

This spirit or acid oyl distilled out of the purified vitriol, is of a pleasant sowreness, and serveth for all those uses, which above by the vitriol were described. And this process is set down onely for that end, that we may see, that when the vitriol is purifyed, that then it is easier distilled, and yieldeth a more pleasant spirit, than if it be yet crude and impure.

And that such a purifying of the vitriol is nothing else but a precipitating of the metal, which the water (as before said) running through the veins thereof hath assumed, is thus to be proved; dissolve any

metal in its appropriate Menstruum, whether it be done with distilled acid spirits or sharp salts, adding common water to them, or else dry by the fire in a crucible, according as you please, and then put into that solution another metal, such as the dissolvent doth sooner seize on, then upon that which it hath assumed, and then you will find, that the dissolvent doth let fall the assumed metal or mineral, and falls upon the other, which it doth sooner seize on, and dissolveth it as being more friendly to it; of which precipitation in the fourth Part shall be spoken more at large.

This one thing more is worthy your observation, that among all metals there is none more soluble than Zinck, and therefore that all the other (as well in the dry as in the wet way) may be precipitated thereby and reduced into light calxes, in so much that the calx of gold or silver precipitated in this manner (if so be you proceed well) retaineth its splendor or gloss, and is like a fine powder wherewith you may write out of a pen.

To make a subtle spirit and pleasant oyl of Zinck.

Because I made mention here of Zinck, I thought good not to omit, that there may be made a penetrating spirit and wholesome oyl out of it by the help of vinegar, which is thus to be done. Take of the flores (which were taught to be made in the first part) one part, put them into a glass (fit for digestion) and pour upon them 8, or 10. parts of good sharp vinegar made of honey; or in want thereof take wine vinegar, and set the glass with the flores and vinegar in a warm place to dissolve, and the solution being performed, pour off the clear, which will look yellow and after you have filtred it abstract the phlegm, and

there will remain a red liquor or balsome, to which you must add pure sand, well calcined, and distill it, and first there will come over an unsavory phlegme, afterward a subtle spirit, and at last a yellow and red oyl which are to be kept by themselves separated from the spirit, as a treasure for to heal all wounds very speedily. The spirit is not inferior unto the oyl, not only for inward use to provoke sweat thereby, but also externally for the quenching of all inflamations, and doubtless this spirit and oyl is good for more diseases, but because its further use is not known to me yet, I will not write of it, but leave the further tryal to others.

To distill a spirit and oyl out of Lead.

In the same manner as was taught of Zinck, there may be out of lead also distilled a subtle spirit and a sweet oyl, and it is done thus: Pour strong vinegar upon *Minium*, or any other calx of lead, which is made *per se*, and not with sulphur, let it digest and dissolve in sand or warm ashes, so long till the vinegar be coloured yellow by the lead, and turned quite sweet. Then pour off the clear solution, and pour on other vinegar, and let this likewise dissolve, and this repeat so often, till the vinegar will dissolve no more, nor grow sweet; then take all these solutions, and evaporate all the moisture, and there will remain a thick sweet yellow liquor, like unto honey, if the vinegar was not distilled, but if it was distilled and made clear, then no liquor remaineth, but only a white sweet salt. This liquor or salt may be distilled after the same manner as was taught with the Zinck, and there will come over not only a penetrating subtle spirit, but also a yellow oyl, which will not be much, but very effectual, in all the same uses, as of the spirit, and oyl of the Zinck was taught.

N. B. This is to be observed, that for to make this spirit and oyl, you need no distilled spirit, but that it may be done as well with undistilled vinegar, and the undistilled yields more spirit than the distilled. But if you look for a white and clear salt, then the vineger must be distilled, else it doth not shoot into crystals, but remaineth a yellow liquor like unto honey, and it is also needless to make the solution in glasses, and by digestion continued for a long time, but it may as well be done in a glazed pot, *viz.* pouring the vinegar upon the Mineum in the pot, and boyling it on a coal fire; for you need not fear that any thing of the vinegar will evaporate, in regard that the lead keeps all the spirits, and lets only go an unsavory phlegm. You must also continually stir the lead about with a wooden spatulla, else it would turn to a hard stone, and would not dissolve: the same must be done also when the solution is done in glasses; and the solution after this way may be done in three or four hours: and when both kind of solutions are done, there will be no difference betwixt them, and I think it providently done not to spend a whole day about that which may be done in an hour.

And if you will have this spirit and oyl better and more effectual, you may mix ʒ i. of crude Tartar made into powder with ℔ j. of dissolved and purified lead, and so distil it after the same manner as you do distil it by it self, and you will get a much subtler spirit and a better oyl than if it were made alone by it self.

To distil a subtile spirit and oyl out of crude Tartar.

Many think it to be but a small matter to make the spirit of Tartar; for they suppose, that if they do but

only put Tartar into a retort, and apply a receiver, and by a strong fire force over a water, they have obtained their desire: and they do not observe, that in stead of a pleasant subtle spirit, they get but a stinking vinegar or phlegm; the pleasant spirit being gone. Which some careful operators perceiving, they caused great receivers to be made, supposing by that means to get the spirit. Now when they after the distillation was done, weighed their spirits together with the remainder, they found, that they had suffered great loss, wherefore they supposed it to be an impossible thing, to get all the spirits, and to lose none, and indeed it is hardly possible to be done otherwise by a retort: for although you apply a great receiver to a small retort, and that there be also but a little Tartar in it, and the joynts being well luted, so that nothing can pass through, and though you make also the fire never so gentle, hoping to get the spirit by that way, yet for all that you cannot avoid danger and loss. For at last the retort beginning to be red hot, and the black oyl going, then and but then the subtlest spirits will come forth, which either steal through the joynts, or else do break the retort or receiver, because they come in abundance and with great force, and do not settle easily: wherefore I will set down my way of making this most profitable, and excellent spirit.

The preparation and use of the spirit of Tartar.

Take good and pure crude Tartar, whether it be red or white, it matters not, make it into fine powder, and when the distilling vessel is red hot, then cast in with a ladle half an ounce and no more at once, and so soon as the spirits are gone forth and setled, cast in another ℥ ss. and this continue, till you have spirit enough, then take out the remainder, which will look

black, and calcine it well in a crucible, and put it in a glass retort, and pour the spirit that came over together with the black oyl, upon it, drive it in sand at first gently, and the subtlest spirits will come over, and after them phlegme, at last a sowre vinegar together with the oyl, whereof you must get each by it self. But if you desire to have the subtle spirit which came over first, more penetrating yet, then you must take the *Caput Mortuum* that staid in the retort, and make it red hot in a crucible, and abstract the spirit once more from it, and the calcined Tartar will keep the remaining moistness or phlegm, and only the subtlest spirit will come over, which is of a most penetrating quality, whereof from half a dram to an ounce taken in wine or any other liquor provoketh a quick and strong sweat, and it is a powerful medicine in all obstructions, and most approved and often tryed in the plague, malignant feavers, scurvy, *Melancolia Hypochondriaca*, collick, contracture, epilepsy and the like diseases. And not only these mentioned diseases, but also many others more, which proceed from corrupt blood under God may successfully be cured with it.

The phlegm is to be cast away, as unprofitable: the vinegar cleanseth wounds: the oyl allayeth swelling and pains, and doth cure scabs, and disperseth knobs that are risen upon the skin, as also other excrescencies of the same, if it be used timely, and the use thereof be continued.

N. B. If the black stinking oyl be rectified from the calcined *Caput Mortuum*, it will be clear and subtle, and it will not only asswage very speedily all pains of the gout, but also dissolve and expel the conglobated gravel in the reines, applyed as a plaister or unguent. In like manner it will dissolve and extract the

coagulated Tartar in the hands, knees and feet, so that the place affected will be freed and made whole thereby: because in such a despicable oyl there lyes hid a volatile salt which is of great vertue. But if you desire experimentally to know whether it be so, then pour upon this black stinking oyl an acid spirit, as the spirit of common salt, or of vitriol or salt nitre, or only distilled vinegar, and the oyl will grow warm and make a noyse and rise, as if *Aqua fortis* had been powred upon salt of Tartar, and the acid spirit will be mortified thereby, and turn to salt. And this well purified oyl doth dissolve and extract the Tartar out of the joynts (unless it be grown to a hard stony substance) even as sope scowres the uncleanness out of cloths, or to compare it better, even as like receiveth its like, and is easily mixed with it, and doth love it; but on the contrary, nothing will mix it self with that wherewith it hath no affinity at all. As if you would take pitch out of cloth by washing it with water, which never will be done by reason of the contrary nature; for common water hath no affinity with pitch or other fat things, nor will it ever be taken out therewith without a mediator, partaking of both natures, *viz.* of the nature of pitch and that of the water, and such are sulphureous salts, and nitrous salts, whether they be fixed or volatile. As you may see at the soap boylers, who incorporate common water by the help of sulphureous salts with fat things, as tallow and oyl. But if you take warm oyl or any thin fat substance, and put it upon the pitch or rozin, then the oyl easily accepteth of and lays hold on its like, and so the pitch is dissolved and got out of the cloth, and the remaining fatness of the oyl may be fetcht out of the cloth with lye or sope and common water, and so the cloth recovereth its former beauty and pureness. And as it falleth out

with sulphureous things, so it doth likewise with Mercurial. For example, if you would take the salt out of powdered flesh or pickled fish with a lixivium it would not succeed, because that the nitrous and acid salts are of contrary natures.

But if upon the powdered flesh or pickled fish you pour on water wherein some of the same salt (wherewithall the flesh was powdered) is dissolved, that salt water will extract the salt out of the flesh, as being its like, much more than common sweet water, wherein there is no salt.

In this manner the hardest things also, as stones and metals, may be joyned or united with water, whereof more in my other books are extant; it is needless here therefore to relate. I gave a hint of it, only for to shew, that always like with like must be extracted. True it is that one Contrary can mortifie another, and take the corrosiveness from it, whereby the pains for a time are asswaged, but whether the cause of the disease it self be eradicated thereby, is a question.

Here may be objected, that I make a difference between the sulphureous and Mercurial salts, whereas neither Mercury nor sulphur apparently is to be seen in either. It is true, he that doth not understand nor know the nature of salts, is not able to apprehend it. And I have not time now to demonstrate it, but the same is shewed at large in my book *de Natura salium*, that some of them are sulphureous, and some Mercurial: but he that looks for a further direction yet, let him read my book *de Sympathia & Antipathia rerum*, wherein he shall find it demonstrated that from the Creation of the World to the time present, there were always two contrary natures fighting one against the other, which fight

will continue so long till the Mediator betwixt God and Man, the Lord Jesus Christ shall put an end unto this strife, when he shall come to separate the good from the bad, by whose lightning and fire flame the proud and hurtful superfluous sulphur shall be kindled and consumed: the pure Mercurial being left in the center.

How to make pretious spirits and oyls out of Tartar joined with minerals and metals.

Take any metal or mineral, dissolve it in a fit menstruum, mix it with a due proportion of crude Tartar, so that the crude Tartar being made into powder together with the solution make up a pap as it were; then at once cast in one spoonful of it, and distil it into a spirit and oyl, which after the distillation must be separated by rectification, for to keep each by its self for its proper use.

The use of the metallized spirit and oyl of Tartar.

This Tartarized spirit of metals is of such a condition, that it readily performeth its operation according to the strength of the spirit, and the nature of the metal or mineral, whereof it is made. For the spirit and oyl of Gold and Tartar is good for to corroborate the heart, and to keep out its enemies: the spirit of silver and tartar doth serve for the brain; that of Mercury and Tartar, for the liver: of lead and tin for the spleen and lungs: of iron and copper for the reins and seminary vessels: that of Antimony and Tartar for all accidents and infirmities of the whole body; and these metallical spirits made with Tartar, provoke sweat exceedingly, whereby many malignities are expelled out of the body. Likewise also the oyl hath its operation, though this of several

metals, as of Mercury and Copper, is not well to be used inwardly, because it causeth salivations and strong vomits. But externally they are very good for to cleanse all putrid ulcers, and to lay a good and firm ground for healing them.

The remainder, whereof the spirit and oyl is distilled, you may take out, and reduce it in a crucible into a metal, so that what is not come over, may not be lost, but made to serve again.

And as you were taught to distil spirits and oyls out of dissolved metals and crude Tartar; so you may get them likewise out of common vitriol and Tartar, *viz.* thus, take one part of Tartar made into powder, two parts of good pure vitriol, mix them well together, and distil a spirit of them, which though it be unpleasant to take, for all that in all obstructions and corruption of blood whatsoever it is not to be despised, but very successfully performeth its operation; especially when it is rectified from its *Caput Mortuum*, and so freed from its phlegm; and its best vertue, which consisteth in the volatility, be not lost in the distilling.

N. B. But if you will have this spirit more effectual, then you may join Tartar and vitriol by boyling them together in common water, and crystallizing; and then cast it in, and distil it, and there will come over a much purer and more penetrating spirit; because that in the solution and coagulation of both, many fæces were separated: but if to one part of vitriol you take two parts of Tartar, and dissolve it together, and so filter and coagulate it, then the Tartar with the vitriol will shoot no more, but there remaineth a thick liquor like unto honey, out of which with spirit of wine there may be extracted a good tincture against obstructions. This liquor taken from Ɔ i. to ʒ

i. doth purge very gently, and sometimes it causeth a vomit, especially if the vitriol was not pure and good: and it may be also distilled into a spirit not inferiour unto the former in vertue. Besides the way above taught, there is yet (for to distil a metallized spirit of Tartar) another way, whereby several metals and minerals may be reduced into pleasant spirits and oyls, and of more vertue, and it is done in this manner.

Take of the Tartar of white Rhenish wine made into powder, pour upon it sweet rain or running water, so that to ℔ j. of tartar there be ℔ x. or ℔ xij. of water, or so much that the tartar may be dissolved by it in the boyling, and then boyl the mixture with the water in a tinned kettle, or which is better, in a glazed pot, until it be quite dissolved, and in the mean while take off the skum (with a wooden skimmer) still as it riseth in the boyling: and when no more skum riseth, and all the tartar is dissolved, then pour the solution thus hot through a linnen cloth, tyed straight on an earthen glazed vessel, that the remaining sliminess may be separated. The tartar water being strained, let it stand for 24. or 30. hours without stirring, and there will stick a crystallized tartar to the sides of the vessel, which after the water is poured off may be taken out, and washed with cold water, and then dryed. This purified tartar keep, until I shall teach you, what further is to be done with it; and this tartar is pure enough for the above said purpose, *viz.* to reduce metals into oyl with it, as shall follow anon. It is also good taken of it self for an abstersive to make the body soluble. But if you desire to have it yet whiter and fairer and in great Crystals, you must proceed thus.

You must know this that all salts, if they shall

shoot into great crystals, there must be a great quantity of them, for of little there comes but little. And if you will make great and fair white crystals of tartar, which will be no better than the former, but only pleasant to the eye, then you must proceed in this manner.

Take of white tartar made into powder about ten or thirty ℔. pour so much water upon it, as is needful for to dissolve it, and boyl it by a strong fire in a tinned kettle, until all the tartar be dissolved, which you may know by stirring in it with a wooden ladle, and skim off diligently all the filth rising on the water; and you must take heed, that you take neither too much nor too little water to it; for if you take too little, part of the tartar will remain undissolved, and so will be cast away and lost among the slime: but if you take too much of it, then the tartar is too much disspersed in the water, and cannot shoot well, and so will likewise be lost, being cast away afterwards with the water. For I have heard many a one complain, that they could get but little of a pound, and therefore supposed the tartar to have been naught, whereas the fault was not in the tartar, but in the workman, that managed not well his work, pouring away one half which did not shoot with the water: but if you proceed well, then four pound of common tartar will yield ℔ iij. of pure white crystals. The solution being well made, and no skim more rising at the top, cover the kettle, and let it cool without removing from the warm place it stands in, which will be done within three or four dayes, if the kettle be bigg. But the fire must be taken away from under the kettle, and so let it stand for the time mentioned. In the mean while the Tartar will crystallise to the sides of the kettle, which crystals after the time is expired, and the water poured off,

are to be taken out and washed and boyled again with fresh water, and so skimmed and crystallised; and this proceeding must be still reiterated, untill (which is done the third or fourth time) the crystals are white enough: then take them out, dry and keep them for use; whereof from ʒ j. to ℥ j. made into powder, and taken in wine, beer, warm broth or other liquor, will give some gentle stooles, and serveth for those, which cannot endure strong physick. This tartar may be sharpned with Diagridium or any other purging drug, that so you need not take it in so great a quantity at once, but a lesser dose may serve turn. But if you do not look for great crystals, but only for Tartar well purified, then you may use this following manual, and you will get exceeding fair and glistering little crystals, which need no beating into powder, but by the working come to be so pure and fine, as if they had been ground upon a stone, and looking not like a dead powder, but having a gloss, like unto small glistering snow that fell in very cold weather, and it is done thus: when the crystals are come to be pure enough by often dissolving and coagulating, then dissolve them once again in pure water, and pour the solution into a clean vessel of wood, copper, or earth being glased; and let it not stand still (as above taught with the crystals) but as soon as it is powred in, with a clean wooden stick stirr about continually without ceasing, till all be cold, which will be done in half an houre. In this stirring the Tartar hath no time to shoot into crystals, but doth coagulate into the smallest glistering powder, pleasant to behold, and like unto frozen snow settleth at the bottom of the vessel; then pour off the water, and dry the powder, and keep it for use. The waters which you poured off, in regard that they contain yet some Tartar,

ought not to be cast away (as others do) but evaporated, and the Tartar contained in them will be saved, and so nothing will be lost, and in this manner not only white Tartar may be reduced into clear crystals, but also the red being several times dissolved and crystallized, loseth its redness, and turneth white and clear. Besides the abovesaid, there is another way to reduce the Tartar into great white crystals at once by precipitation; but these being good enough for our purpose, *viz.* to make good medicines out of metals, I hold it needless to loose more time by the relation of it, and so I will acquiesce.

Another way to make a metallised spirit of Tartar.

Take of purified Tartar dissolved and coagulated but once, as much as you please, pour so much rain or other sweet water to it as will serve to dissolve it; in which solution you must boyl plates of metals, until the Tartar have dissolved enough of it, so that it will dissolve no more; the sign whereof is, when the solution is deep coloured of the metal, and during your boyling you must often supply the evaporated water with pouring on of other, lest the Tartar come to be too dry and burn; and this solution may be done best of all in a metallical vessel; as when you will make the solution of iron, you may do it in an iron pot; and for copper you may take a copper kettle, and so forth for other metals, a vessel made of the same is to be taken. But you must know that gold, silver, and crude Mercury, unless they be first prepared cannot be dissolved like iron and copper, but when they are prepared first for the purpose, then they will also be dissolved. In like manner some minerals also must be first prepared, before they can be dissolved with Tartar and water. But if you can

have good glasses or glazed vessels of earth, you may use them for all metals and minerals for to dissolve them therein, and the solution you may not only use of it self for a medicine, but also distill it, and make a very effectual spirit and oyl of it as followeth.

To distill the spirit and oyl of Lead and Tin.

Take the filings of Lead and Tin, and boyl them with the water or solution of Tartar in a leaden or tin vessel, untill the Tartar be sweetned by the water, so that it will dissolve no more, to which pass it will be brought within twenty four hours, for both these metals will be dissolved but slowly, but if you would perform this solution sooner, then you must reduce the metals first into a soluble calx, and then they may be dissolved in less time than an hour. The solution being done, you must filtre it, and in B. abstract all the moisture to the thickness or consistency of honey, and there will remain a pleasant sweet liquor, which of it self with out any further preparation may safely be used inwardly for all such diseases, for which other medicaments, made of these metals are useful. Especially the sweet liquor of lead and tin doeth much good in the Plague, not only by driving the poyson from the heart by sweating, but also by breaking or allaying the intolerable heat, so that a happy cure doth follow upon it: but externally the liquor of lead may be used succesfully in all inflammations, and it healeth very suddenly, not only fresh wounds, but also old ulcers turned to fistulaes; for the Tartar cleanseth, and lead consolidates.

The liquor of tin is better for inward use than for outward whose operation is not so fully known yet, as that of lead. But if you will distil a spirit thereof,

then cast it in with a ladle by little and little, as above in other distillations oftentimes was mentioned, and there will come over a subtle spirit of tartar, carrying along the vertue and best essence of the metal, and therefore doth also prove much more effectual than the common spirit of tartar, which is made alone by it self, and this spirit as well that which is made of tin, as that of lead, if it be well dephlegmed first, may be used and held for a great treasure in all obstructions, especially of the Spleen; and few other medicines will go beyond them; but besides there must not be neglected the use of good purging medicines, if need require them. With the spirit there cometh over also an oyl, which is of a quick operation, especially in wounds and sores of the eye, where other oyntments and plaisters may not so fitly be used, for it doth not only allay the heat and inflammation, a common symptome of the eye wounds, but also doth hinder and keep back all other symptomes which few other medicaments, are able to do; and for the residue, if it be driven further by the strongest fire, then there will come over a sublimate, which, in the air dissolveth into oyl, which is also of a powerful operation, not only in physick, but also in Alchymy.

And the Lead runeth together into a fair white *Regulus*, which is much whiter, purer and fairer than other common lead: but the tartar retaines the blackness, and raiseth it self to the top as a fusible dross, which is impregnated with the sulphur of lead, wherewith you may colour hair, bones, feathers and the like, and make them to be, and remain brown and black.

I made tryal once of such a distillation in an iron vessel, whereby the same in the inside was so

whitened by the purified lead, that it was like unto fine silver in brightness: which afterwards trying again, it would not fall so fair as at first; whereat none ought to wonder, for I could write something more (if it were fit) of tartar, knowing well what may be effected with it, if I did not stand in fear of scoffers, which vilify all what they do not understand. I durst presume to call tartar the Sope of the Philosophers; for in the cleansing of some metals, by long experience I found it of admirable vertue; though I would not be understood thus, as if I did count it to be the true *Azoth universalis Philosophorum*, whereby they wash their Laton: but I cannot deny, but that it is of particular use for the washing and cleansing of several metals; for it is indued with admirable vertues for the use of metals, whereof in other places more shall be said hereafter.

How to make a Tartarised spirit and oyle out of Iron or Steel and Copper.

If you intend to make a good medicine out of iron or steel or copper joyned with tartar, then for the iron or steel take an iron pot, and for copper a kettel of copper, make them very clean and put in it the filings of iron, or steel, or copper, which you please, and twice as much of pure tartar made into powder, and so much water, that the tartar maybe dissolved well by it in the boyling, and so boyl the metal with the tartar-water so long, till it be deeply coloured by the metal, as red by the iron, and deep green by the copper; and when the water in the boyling doth waste, you must still supply it with other, that the tartar may not burn; for there must be alwayes so much water, that no skin of the tartar may rise at the top, but that it remain always open, and there must not be too much water neither, lest it be too sweet,

and not able to dissolve the metal. The solution of iron or steel being come to be red and sweet, and in taste like unto vitriol, but green and bitter of copper, pour it off warm by inclination into an other clean vessel, and let it stand so long again in a very gentle heat of coals, till almost all the water be evaporated, and the dissolved metal with the tartar remain in the consistency of honey.

Which metallical liquor may be used inwardly and outwardly (especially that of iron) which doth purge gently, and openeth the obstructions of the Liver and Spleen: cleanseth the Stomach, and killeth Worms: externally used it is a good wound balsome, and goes far beyond all such as are made of vegetables. It is a singular treasure, not only for to cure new wounds; but also for to cleanse and heal old corrupt exulcerated sores, turned to fistulaes; but the liquor of copper is not so safe for to be used inwardly, for it is not only very unpleasant in taste, but also causeth vehement vomits: and therefore I would not advise any one to be forward to use it, unless it be for strong folks and for to kill worms in them, for which purpose it is excellent good and surpasseth all other medicines whatsoever; but to little children it ought not to be given at all, in regard that it is of far too strong an operation for them.

N. B. And if you will use it to strong bodies against the worms or stomach-agues, you must observe that the patient (in case that he cannot get it up) thrust his finger into the throat to further the vomiting, that it may not stay behind, but come forth again out of the body, which done health followeth upon it; but if it remain in the body, it causeth a loathsomeness to use it any more. And therefore you must take heed to use it warily: and in regard that this liquor is very

bitter, you may mix it with some sugar, to facilitate the taking thereof; but that of iron needeth no such correction, it being sweet enough of it self, and therefore I commend and prefer it before the other: but if you will needs have that of copper (because it worketh so strongly) then the Patient must keep in from the cold aire, and not presently after the operation load the stomach with strong drink and superfluity of meat, contenting himself with some warm broth and a little cup of wine or beer, and the next day his meat and drink will taste the better with him, and do him so much the more good.

But externally, this liquor is of the same use with that of iron or steel, yea, proveth more effectual and speedier in healing. It would be good that Surgeons knew how to prepare it, and would use it instead of their salves, wherewith many fresh wounds are spoyled and turned into horrid ulcers, especially it requiring so little cost and pains to make it. And if you would have these liquors purer yet, you must pour on spirit of wine, and extract them, and they will easily yield their tincture, and leave many fæces behind which are good for nothing: but the tincture will be so much the better, purer, and more effectual, so that you need use but four or five drops for purging, whereas of the gross liquor you must have from 4, 6, 8. to 12. or 16. drops: and this extracted tincture worketh also much better externally, and keepeth longer than the balsome or liquor, which in time is corrupted, but the extraction is never spoiled. But if you will distil the liquor or balsome, it is needless that it be extracted first, but may be distilled so as the boyling made it, after the same manner, as above was taught for Lead, and there will come over a yellow spirit and oyl from iron or steel, and from copper a greenish spirit and oyl.

The spirit and oyl of iron may safely be used in the plague, feavers, obstructions, and corruption of blood, from ʒ i. to ℥ i. It is much better to provoke sweat, than that which is made of crude Tartar, without addition of a metal: the like doth that also which is made of copper and more effectually yet, and sometimes causeth a vomit, if it be used in a greater quantity, than is fitting.

N. B. Although the Chymists do prefer copper before iron, as a more firm and ripe metal, nevertheless it is found by experience, that iron or steel by reason of its sweetness is better to be used for an inward medicine than copper. But for external use, copper (if it be well prepared) hath the preheminence, being an appropriate medicine for all ulcers and open sores, in all the parts of the body, if the same inwardly be kept clean by fitting purges. For not only the now described medicine, but also many more besides, are taught to be made out of copper in other places of my books.

A Country-physick and purge I will teach for those, which either live far from Apothecary-shops, or have no money to spare for physick; and it is to be made out of iron and copper, whereby they may cleanse their slimy stomachs, spoyled by a disorderly dyet, whence head-aches, worms, agues, and other diseases are occasioned, warning withal those that are either too old or too young, or else decayed and weak, and so not strong enough for such powerful physick, that they will forbear to use it, lest besides the worms, they kill and expel life it self also; but those that are of a strong constitution, and a middle age, and of a sound heart, may safely use this purge, whereby stomach-agues, belly-worms, and may other occult diseases may be cured with good success. The

preparation is done thus: Take ℥ *ss.* of pure tartar made into powder, & ℥ *ss.* or ℥ j. of sugar or honey, and ℥ v. or ℥ vj. of spring or rain water, put all into a clean copper vessel which is not greasy, and boyl it upon a coal fire as long or somewhat longer than you use to boyl an egg, or at the furthest half a quarter of an hour; take off the skum in boyling, let it stand till it be milk-warm, so that it may be drunk. This potion tasting almost like warm wine sweetned with sugar, give unto the patient to drink, and let him fast upon it, and within half an hour it will begin to work upwards and downwards; whereat you need not be amazed, but only keep the body warm, and within an hour it will have done working. But if you will drive out worms from little children by purging, then instead of the copper-vessel, take a clean iron-vessel, and put in a less quantity of tartar, sugar and water, and boyl it as abovesaid, and give it to them, and it will purge only downward, but sometimes it will also give a gentle vomit, which will do them no hurt, but rather will cleanse the stomach the better. But if the drink be too weak, so that it doth not work, it may be used again the next day (but you must take more of the ingredients, or else let them boyl longer) there is no danger in it at all, if you proceed aright, and it is much pleasanter to take, than the bitter worm-feed, wherewith they usually torment children.

The reason why this decoction works in this manner is, that the tartar and sugar being boyled in metallical vessels with water, work upon the metal, and extract vertue out of it, which causeth vomiting and purging (the Tartar also being helpful to it.)

How to make a Tartarised spirit of Mercury.

Vulgar Mercury cannot be dissolved like the former

metals with tartar and water, without any foregoing preparation; but must be sublimed first with salt and vitriol, or crystallised with *Aqua fortis*, and then it may be dissolved by boyling with tartar and water, and reduced into a balsame, like other metals, but is not to be used inwardly, unless it be digested a sufficient time, so that its fierceness be allayed: Externally it may safely be used in all desperate, especially venereal sores, and it is a very effectual and profitable medicine for them. But most of all it doth serve for Alchymy, although few do know this guest, because he will not be seen by every one. The spirit which comes over from it by distillation, is an admirable thing not only in physick, but also in Alchymy: yet you must take heed, that instead of a friend, you do not harbor a great enemy: for its force and vertue is very great and powerful.

How to make a Tartarised spirit of Gold and Silver.

Gold and silver also can by no means be dissolved with tartar in a wet way: but in a dry way adding its helper to it, it will easily dissolve, which doth not belong hither; but if you will draw a spirit of it, then the gold and silver must first by dissolving and coagulating be reduced to crystals, and then dissolved with purifyed tartar and water, and of Gold you will get a yellow solution, and of silver a white inclining unto green, which being reduced to the consistency of honey, may be used safely and without fear. The solution of Gold doth loosen and keep the body open; it effectually strengtheneth the stomach, heart, lungs, and liver, and other principal members: and that of silver purgeth very forcibly, according to the quantity given, like another purge, but without harm or danger, so that in all diseases where purging is necessary, it may be used safely

from ℈ i. to ʒ *ss.* but that of gold is used in a smaller quantity: and both the liquor of gold and of silver may very successfully be used externally: but because for external uses inferiour metals will serve the turn, it is needless to use costly things thereto.

The spirit which is forced from it by distillation, is endued with great vertue: for the volatile part of the metal cometh over-joyned with the spirit of tartar, the remainder may be reduced, so as it was taught of other metals. This spirit, especially that of Gold, is exceeding good in the plague and other diseases, where sweating is necessary: for it driveth not only by sweating, all Malignities from the Heart, but also doth strengthen the same, and preserveth it from all hurtful symptomes. Likewise also that of silver is very commendable, especially if it be first dephlegmed from its *Caput Mortuum*, as above was taught in the preparation of the common spirit of tartar. For any Physitian expert in Chymistry may easily guess what the spirit of tartar well rectifyed and impregnated with the vertues of gold may effect, and therefore it is needless to make any further mention of it, but it shall be left to the tryal thereof.

To make a Tartarised spirit of Antimony.

Crude Antimony cannot be dissolved in such a manner as above hath been taught: but if it be first prepared into flores, or a *vitrum*, it yieldeth easily its vertue in boyling, and it is done thus: Take to one part of the flores or of small ground *vitrum Antimonii* made *per se*, three parts of pure tartar, and 12. or 15. parts of clean water, boyl the Antimony with the tartar and water in a glazed pot for three or four hours, and the evaporated water must be still supplyed with other that the tartar may not burn for want of water, and

the *vitrum* must be sometimes stirred about with a wooden spatula (which the flores being light do not need): This done, the tartar water will be deep red coloured by the Antimony, and leave the remaining Antimony settled in the bottom, from which pour off the solution, and after having filtred it, evaporate the water from it, and then extract it once more with spirit of wine, and you will get a blood-red *Extractum*, whereof 1, 2, 3. to 10. or 12. drops given at once, causeth gentle vomits and stools, which may be safely used by old and young in all diseases that have need of purging, and you need not fear any danger at all: For I know no vomit, which purgeth more gently than this, and if you please, you may make it work only (*per inferiora*) downward, so that it shall cause no vomits at all: and you need do nothing else but make a toast of brown bread, and hold it hot to your nose and mouth, and when this is almost cold, have another hot in readiness, and so use one after another by turns, till you feel no more loathing, and that the vertue of Antimony hath begun to work downward: This is a good secret for those that would use Antimonial physick, but that they are affraid of vomiting, which they are not able to endure. But if you will not spend so much pains, as to make such an Extract, then do as you was taught above to do with the copper, and take ten or twelve grains of prepared Antimony for an old body, but for a young one 5, 6. grains or more or less according to the condition of the person, and ℥ ss. or ʒ vj. of pure tartar, and together with ℥ iiij. or ℥ v. of water put it in a little pipkin, and boyl it a quarter of an hour, then pour the solution only into a cup, and disolve a little sugar in it, whereby the acidity of the Tartar will somewhat qualified. The *decoctum* drink warm, and keep your self as it is fit, and it will work

much better, than it if had been steeped over night in wine, which not every one can abide to take fasting; but this *decoctum*, because it tasteth like warm and sweet wine, is much pleasanter to take.

N. B. It is to be admired, that well prepared Antimony is never taken in vain: for although it be given in a very small quantity, so that it cannot cause either stools or vomits, yet it worketh insensibly, *viz.* it cleanseth the blood, and expelleth malignities by sweat, so that mighty diseases may be rooted out thereby without any great sensible operation. Which many times hapned unto me, and gave me occasion to think further of it; and therefore I sought how to prepare Antimony so, that it might be used daily without causing of vomits or stools, which I put in execution accordingly, and found it good, as afterward shall follow.

Of the solution above described, *viz.* of the flores of Antimony with tartar make a good quantity, and after the evaporation of the water distill a spirit of it, and there will also come over a black oyl, which must be separated from the spirit, and rectified *per se*; and externally applyed it will not only do the same wonderful operations, which above have been ascribed to the simple oyl of tartar, but it goeth also far beyond it, for the best essence of Antimony hath joyned it self thereunto, in the distilling and so doubled the vertue of the oyl of Tartar; and this oyl may with credit be used not only for all podagrical tumors to allay them very readily, but also by reason of its dryness it doth consume all other tumors in the whole body, whether they be caused by wind or water: for the volatile salt by reason of its subtlety, conveyeth the vertue of Antimony into the innermost parts of the body in a marvellous and incredible way,

whereby much good can be performed in Chyrurgery.

As for the spirit, you may not only use it very successfully, in the Plague, Pox, Scurvy, *Melancholia Hypochondriaca*, Feavers, and other obstructions and corruptions of blood, but also if you put some of it into new wine or beer, and let it work with it, the wine or beer comes to be so vertuous thereby, that if it be daily used, it doth stay and keep off all diseases proceeding from superfluous humors and corrupted blood, so that neither Plague, Scurvy, *Melancholia Hypochondriaca*, or any other disease of that kind can take root in those that daily use it, wherein no metal or mineral (except gold) can be parallel'd with it: but in case you have no conveniency to make that spirit, and yet you would willingly have such a medicinal drink made of Antimony, then take but of the solution made with tartar, before it be distilled, and put ℔ j. or ℔ j ss. of it into 18. or 20. gallons of new wine or beer, and let it work together, and the vertue of the Antimony by the fermentation of the wine will grow the more volatile and efficacious to work. And if you cannot have new wine (in regard that it doth not grow every where) you may make an artificial wine of Honey, Sugar, Pears, Figs, Cherries or the like fruit, as in the following third part shall be taught, which may stand in stead of natural Wine.

These medicinal wines serve for a sure and safe preservative, not only to prevent many diseases, but also if they have possessed the body already, effectually to oppose and expel them. Also all external open sores (which by daubing and plaistering could not be remedied) by daily drinking thereof may be perfectly cured. For not only *Basilius Valentinus*, and *Theophrastus Paracelsus*, but many

more before and after them knew it very well, and have written many good things of it, which few did entertain, and (because their description was somewhat dark) most despised and defamed them for untruths.

In like manner, and much more may this my writing be lightly esteemed of, because I do not set down long and costly processes, but only according to truth, and in simplicity do labour to serve my neighbour, which doth not sound well in the ears of the proud world, which rather tickle and load themselves with vain and unprofitable processes, than harken unto the truth; and it is no wonder, that God suffereth such men, which only look after high things, and despise small things, to be held in Error.

Why do we look to get our Medicines by troubling our brains, & by subtle and tedious works, whereas God through simple nature doth teach us otherwise. Were it not better to let simple nature instruct us? surely if we would be in love with small things, we should find great ones. But because all men do strive only for great and high things, therefore the small also are kept from them; and therefore it would be well, that we could fancy this maxim, that also things of small account can do something, as we may see by Tartar and despicable Antimony, and not only so many coals, glasses, materials, and the like, but also the pretious time would not be wasted so much in preparing of medicaments: for all is not gold that glistereth, but oftentimes under a homely coat some glorious thing is hid; which ought to be taken notice of.

Some may object why do I teach to joyn the Antimony first with the Tartar by the help of common water before its fermentation with the wine:

whether it would not be as good to put it in of it self in powder, or to dissolve it with spirit of salt (which would be easier to do than with Tartar) and so let it work? To which I answer, that the working wine or drink, receiveth no metallical calx or solution, unless it be first prepared with tartar or spirit of wine. For although you dissolve Antimony, or any other metal or mineral in spirit of salt, or of vitriol, or of salt nitre, or any other acid spirit, and then think to let it work with wine or any other drink, you will find that it doth not succeed; for the acid spirit will hinder the fermentation, and let fall the dissolved metals, and so spoyl the work; and besides, Tartar may be used among all drinks, and doth more agree with ones taste and stomach, than any corrosive spirit.

In the same manner as was taught of Antimony, other minerals and metals also may be fitly joyned with wine or other drink, and the use of such Antimonial wine is this, *viz.* that it be drank at meals and betwixt meals like other ordinary drink to quench thirst, but for all that, it must not be drank in a greater quantity, than that Nature be able to bear it. For if you would drink of it immoderately, it would excite vomits, which ought not to be, for it is but only to work in an insensible way, which if it be done, it preserveth not only the body from all diseases proceeding from corrupted impure blood, as the Plague, Leprosy, Pox, Scurvy, and the like, but by reason of its hidden heat, whereby it doth consume and expel all evil and salt humors (as the Sun dryeth up a pool) by sweat and urine, and so doth unburthen the blood from all such sharp and hurtful humors, *&c.* It doth not only cure the abovesaid diseases, but also all open sores, ulcers, fistulaes, which by reason of the superfluity of salt humors can admit of no healing, and it doth dispatch them in a

short time in a wonderful manner, and so firmly that there is no relapse to be feared.

This drink is not only good for the sick, but also for the whole (though in a smaller quantity) because that it wonderfully cleanseth the whole body, and you need not fear the least hurt either in young or old, sick or healthy. And let no man stumble at it, that many ignorant men do defame Antimony and hold it to be poyson, and forbid it to be used; for if they knew it well, they would not do so; but because such men know no more, than what they get by reading, or by hear-say, they pronounce a false sentence; and it might be replyed unto them, as *Apelles* did to the Shooe-maker; *Ne sutor ultra crepidam*: but what what shall we say? *Non omnis fert omnia tellus.* When an Ass after his death doth rot, out of the carcass groweth Beetles, which can fly higher than the Ass from whence they came; In the like manner we wish it may fare with the haters of royal Antimony, *viz.* that their posterity may get seeing eyes, and what they know not, they may forbear to despise and scoff at.

I must confess, that if Antimony be not well prepared, and besides, be indiscreetly used by the unskilful, that it may prejudice a man in his health, which even the vegetables also may do. But to reject it by reason of the abuse, would be a very unwise act: If perchance a child should get into his hand a sharp-edged knife, and hurt himself or others, because it doth not understand how to use a knife, should therefore the use of a knife be rejected and forbidden to those that are grown up and know how to use it? Good sharp tools make a good workman; so good quick working and powerful medicines make a good physitian; and the sharper the tool is, the

sooner a stone-carver or other craftsman may spoyl his work by one cut which he doth amiss: which also must be understood of powerful medicines, for if they be used pertinently, in a short time more good may be done with them, than with weak medicaments in a long time. Now as a sharp tool is not to be handled but by a good workman, so likewise a powerful medicine ought to be managed by an understanding and conscientious physitian, who according to the condition of the person, and the disease, knows to increase or abate the strength of the medicine, and not by such a one, as doth minister it ignorantly without making any difference at all.

Let no man marvail, that I ascribe such great vertues unto Antimony, it being abundantly enriched with the *primum ens* of gold. If I should say ten times as much more of it, I should not lye. Its praise is not to be expressed by any mans tongue; for purifying of the blood, there is no mineral like unto it; for it cleanseth and purifieth the whole man in the highest degree, if it be well prepared first, and then discreetly used. It is the best and next friend to gold, which by the same also is freed and purified from all addition and filth, as we said even now, of man. Every Antimony for the most part agreeth with gold and its medicine; for out of Antimony, by the cleansing Art may be made firm gold, as in the fourth part shall be taught, and which is more, by a long digestion a good part of the same is changed into gold. Whereby it is evident, that it hath the nature and property of gold, and it is better to be used for a medicine than gold it self, because the golden vertue is as yet volatile in this, but in the other is grown fixed and compacted, and may be compared to a young child in respect of an old man.

Therefore it is my advice, that in Antimony medicine should be sought, and not to trifle away time and cost in vain and useless things.

Further note, That if you desire to contract nearer together the vertue of Antimony or any other mineral or metal, as above was taught to be done with the Tartar, you must by exhalation of the superfluous moisture in Balneo, reduce the solution to a honey thick liquor, and pour spirit of wine upon it for to extract, and within few days it will be very red; then pour it off and pour on other, and let this likewise extract: continue this proceeding with shifting the spirit of wine, till the spirit of wine can get no more Tincture; then put all the coloured spirit of wine together into a glass with a long neck, and digest it so long in a warm Balneum, till the colour or best essence of Antimony be separated from the spirit of wine, and settled to the bottom like a blood red thick fat oyl, so that the spirit of wine is turned white again; which is to be separated from the fair and pleasant oyl of Antimony, which is made without any corrosive, and is to be kept as a great treasure in physick. The spirit of wine retains somewhat of the vertue of Antimony, and may be used with success of it self both inwardly and outwardly. But the Tincture as a Panacea in all diseases acteth its part with admiration, and as here mentioned of Antimony, so in the same manner all metals by the help of Tartar and spirit of wine may without distilling be reduced into pleasant and sweet oyles, which are none of the meanest in Physick: for every knowing and skilful Chymist will easily grant, that such a metallical oyl, as without all corrosives out of the gross metals is reduced into a pleasant essence, cannot be without great and singular vertue.

How to make good spirit and oyles out of Pearls, Corals, Crabs-eyes, and other light soluble stones of beasts and fishes.

Take to one part of pearls or corals (made into fine powder) three or four parts of pure Tartar, and so much water as will dissolve the Tartar by boyling; put the corals, Tartar and water together into a glass body, which must stand in sand, and give it so strong a fire, that the water boyl in the glass body with the Tartar, and may dissolve the corals. (This solution may be done also in a clean earthen pot that is glased, and the evaporated water must be supplyed with other, as above was taught to be done with the metals.) The corals being dissolved, let them cool, filtrate the solution, and abstract all the moisture from it in Balneo, and there will remain a pleasant honey-thick liquor, which may be used in Physick either of it self, or else once more extracted with spirit of wine and purified, or else distilled, as you please.

The extract or Tincture is better than the liquor, and the spirit is better than the extract or tincture: and all three may well and safely be used; they strengthen the heart and brain; especially those which are made of pearls and corals, they expel the urin and keep the body soluble. Those of crabs eyes and of pearches and other fishes open and cleanse the passages of the urin from all slime and impurity, and they powerfully expel the stone and gravel in the reins and bladder.

N. B. The distilled spirit of corals being well rectified, is good for the Epilepsy, Melancholy, and Apoplexy. It expelleth and driveth out all poyson by sweating, because it is of a golden nature and quality, whereof in another place more shall be said.

To distill a spirit out of salt of Tartar and crude Tartar.

If you take a like quantity of crude Tartar and of salt of Tartar, and dissolve it with clean water, and then evaporate the water still skimming it, till no skin more do rise, and then let it cool, there will shoot white crystals, which being distilled as common Tartar, they will yield a purer subtler and pleasanter spirit, than the crude Tartar doth, in all to be used as above hath been taught of the simple spirit of Tartar: therefore it is needless here to describe its use. Before you distill a spirit thereof, you may use them in stead of *Tartarus vitriolatus* for purging, they will cause gentle stools, and drive also the urin and stone, and are not unpleasant to take. The dose is from ℈ i. to ʒ i. in waters fit for your purpose. This salt dissolved with water purifieth metals (if they be boyled therein) and maketh them fairer then common Tartar doeth.

How to get a powerful spirit out of the salt of Tartar, by the help of pure sand or peble-stones.

In the first part of this book I taught how to make such a spirit, but because the materials, which are to be distilled in that furnace must be cast upon quick coals, whereby the remainder is lost, and that also not every one hath the conveniency to set up a furnace that requireth more room than this here doth: therefore I will set down how it may be got with ease in this our present furnace, without the loss of the remainder, which is not inferior to the spirit it self. And it is done thus:

Make a fair white salt of calcined Tartar by dissolution, filtration and coagulation, pulverise that salt in a warmed morter, and add to it a fourth part of small pulverised crystal or flints or only of fine

sand, washed clean, mix it well, and cast one spoonful thereof at once into your red-hot vessel (which must be made of earth) and so cover it, and the mixture as soon as it is red hot, will rise and boyl (as common Allome doth, when it cometh to a sudden heat) and yield a thick white heavy spirit; and when it ceaseth to come forth, then cast in another spoonful, and stay out the time of its settling, and then another part again, till all your mixture be cast in. When no more spirit goeth forth, then take off the lid from the distilling vessel, and with an iron ladle take out that which stayed behind, whilest it is yet red-hot and soft, and it will look like unto a transparent clear white fusible glass, which you must keep from the air, for it will dissolve in it, till I teach you what you are to do with it.

The spirit which came over, may either be kept as it is, or else rectified *per arenam* in a glass retort, and used in Physick; it is clean of another taste than the spirit of common salt or vitriol, for it is not so sharp; it smelleth of the flints after a sulphureous manner, and tasteth urin-like, and it is very good for those that are troubled with the gout, stone and Tisick: for it provoketh urin and sweat mightily, and (because it cleanseth and strengthneth the stomach) it also maketh one have a good appetite to his Victuals. What it can do else is unknown to me as yet, but it is credible that it may act its part in many other diseases, which is left free for every one to try. In my opinion (since the spirit of the salt of Tartar is good to be used of it self for the stone, and that here it is strengthned by the sand, which have the signature of the stone of the Microcosme) there is hardly any particular medicine, which can go beyond it, but I leave every one to his own opinion and experience. Externally used, it quencheth inflammations and

maketh a pure skin, &c. The remainder, which I bid you keep, and looks like a transparent clear glass, is nothing else but the most fixed part of the salt of Tartar and flints, which joyned themselves thus in the heat, and turned to a soluble glass, wherein lyes hid a great heat and fire. As long at it is kept dry from the air, it cannot be perceived in it: but if you pour water upon it, then its secret heat will discover it self. If you make it to fine powder in a warm morter, and lay it in a moist air, it will dissolve and melt into a thick and fat oyl, and leave some fæces behind. This fat liquor or oyl of flints, sand or crystal may not only be used inwardly and outwardly of it self, but also serveth to prepare minerals and metals into good medicines, or to change them into better by Chymical art. For many great secrets are hid in the contemptible peble or sand; which an ignorant and unexpert man (if they were disclosed to him) would hardly believe: for this present world is by the divels craft so far possessed with cursed filthy avarice, that they seek for nothing but money, but honest and ingenious sciences are not regarded at all; and therefore God doth close our eyes that we cannot see what lyeth before them, and we trample upon with our feet. That worthy man *Parcelsus* hath given it us sufficiently to understand, when he saith in his book (containing the vexations of Alchymists) that many times a despicable flint cast at a Cow is more worth than the Cow; not only because that gold may be melted out of it, but also that other inferior metals may be purified thereby, so that they are like unto the best gold and silver in all tryals; and although I never got any great profit by the doing of it, yet it doth suffice me that I have seen several times the possibility and truth thereof, which in its proper place likewise shall be taught.

This liquor of flints is of that nature toward the metals, that it maketh them exceeding fair, but not so, as women do scowre their vessels of tin, copper, iron, *&c.* with ly and small sand, till all filth be scoured off, and that they get a bright and fair gloss: but the metals must be dissolved therein by Chymical art, and then either after the wet or dry way digested in it for its due space of time; which *Paracelsus* calleth to go into the mothers womb, and be born again: if this be done rightly, then the mother will bring forth a pure child. All metals are engendred in sand or stone, and therefore they may well be called the mother of metals, and the purer the mother is, the purer and sounder child she will bear, and among all stones there is none found purer than the peble, crystal or sand, which are of one nature (if they be simple and not impregnated with metals:) And therefore the peble or sand is found to be the fittest bath to wash the metal withall. But he that would take this bath to be the Philosophers secret Menstruum, whereby they exalt the King unto the highest purity, would be mistaken; for their Balneum is more friendly to gold by reason of its affinity with it than with other metals, but this doth easier dissolve other metals than gold. Whereby it is evident, that it cannot be *Benard* his fountain (*Bernhardi fontina*) but must be held only to be a particular cleanser of metals. But omitting this, and leaving it to the further practise and tryal of those that want no time nor conveniency for to search what may be done with it, let us take notice of the use of this liquor in physick, for which uses sake this book is written. That which hath been said, was only done to that end, that we may observe, that we must not always look upon dear and costly things, but that many times even in mean and contemptible things

(as sand & pebles) much good is to be found.

How to extract a blood-red Tincture with spirit of wine out of the liquor of peble-stones.

If you will extract a tincture out of peble-stones, for use in Physick or in Alchymy, then in stead of the white take a fair yellow, green or blew peble or flint, whether it hold fixed or volatile gold, and first with salt of tartar distill the spirit thereof; or if you do not care for the spirit, then melt the mixture in a covered crucible into a transparent, soluble and fusible glass, and in a warm morter make it into fine powder; put this powder in a long necked glass, and pour upon it rectified spirit of wine (it needeth not to be dephlegmed, it matters not if it be but pure) let it remain upon it in a gentle warmth, till it be turned red (the glass with the prepared peble or flints must be often stirred about, that the peble be divided, and the spirit of wine may be able to work upon it) then pour off the coloured spirit of wine, and pour on other, and let this likewise turn red: this pouring off and on must be iterated so often, till the spirit of wine get no more colour out of it. All the Tinctured spirit of wine put together, & abstract in a Balneum through a Limbeck from the Tincture which will remain in the bottom of the glass body like a red juyce, which you must take out and keep for its use.

The use of the Tincture of pebles or flints in Physick.

This Tincture if it be made of gold, pebles or sand, is to be held for none of the least medicines, for it doth powerfully resist all soluble Tartareous coagulations, in the hands, knees, feet, reins and bladder; and although in want of those that hold gold, it be extracted but only out of common white peble, it

doth act its part however, though not altogether so well as the first. Let no man marvel, that sand or pebles made potable, have so great vertue; for not all things are known to all; and this Tincture is more powerful yet, if first gold have been dissolved with the liquor of pebles before the extraction. And let no man imagine that this Tincture comes from the salt of Tartar (which is taken to the preparing of the oyl of sand) because that of it self also doth colour the spirit of wine, for there is a great difference betwixt this Tincture and that, which is extracted out of the salt of Tartar: for if you distill that of the salt of tartar in a little glass body or retort, there will come first a clear spirit of wine, then an unsavory phlegm, and a salt will remain behind, in all like unto common salt of tartar, wherein after its calcining not the least colour appeareth, and because none came over neither, it might be questioned where it remained then?

To which I answer, that it was not a true tincture, but only that the sulphur in the spirit of wine was exalted or graduated by the corporeal salt of tartar, and so got a red colour, which it loseth as soon as the salt of tartar is taken from it, and reassumeth its former white colour: even as it hapneth also, when the salt of urin, or of harts-horn or soot, or any other like urinous salt is digested with spirit of wine, that the spirit turneth red of it, but not lastingly, but just so as it falls out with the salt of tartar, for if by rectification it be separated again from the spirit of wine, each (*viz.* both the salt and also the spirit of wine) doth recover again its former colour, whereby it appeareth, that (as above said) it was not a true tincture. He that will not believe it, let him dissolve but ʒ i. of common white salt of tartar in ℔ i. of spirit of wine, and the spirit will turn as red of it, as if it

had stood a long time upon several pounds of blew or green calcined salt of tartar; and if I had not tryed it my self several times, I should have also been of that opinion: but because I found it to be otherwise, therefore I would not omit to set down my opinion: though I know I shall deserve small thanks of some, especially of those which rather will err with the greater number, than to know and confess the truth with the less number. However, I do not say, that the supposed tincture of the salt of Tartar is of no vertue or useless; for I know well enough that it is found very effectual in many diseases: for the purest part of the salt of Tartar hath been dissolved by the spirit of wine, it being thus coloured thereby, and therefore that tinctured spirit of wine may very fitly be used. But as for the Tincture, which is extracted out of the prepared pebles, it is clean of another condition: for if you abstract the spirit of wine from it, though it also cometh over white, yet there remaineth a deep tinctured salt, whose colour is lasting in the strongest fire, and therefore may be counted a true Tincture.

How by the help of this liquor out of Gold its red colour may be extracted so that it remains white.

This oyl or liquor of pebles is of such a condition, that it doth precipitate all metals which are dissolved by corrosives, but not after that manner as the salt of Tartar doth; for the calx of metals which is precipitated by this liquor; (because that the pebles do mingle themselves therewith) is grown much heavier thereby, than if it had been only precipitated with salt of Tartar.

For example, dissolve in *Aqua Regia* as much Gold as you please, and pour of this liquor upon it, till all the Gold fall to the bottom like a yellow powder, and the solution turn white and clear, which you must pour off, and edulcorate the precipitated Gold with sweet water, and then dry it (as you was taught to do with the *Aurum fulminans*) and you need not fear that it will kindle and fulminate in the drying, as it useth to do, when it is precipitated with salt of Tartar or spirit of urin, but you may boldly dry it by the fire, and it will look like yellow earth, and will weigh as heavy again as the Gold did weigh before the solution; the cause of which weight is, the peble stones, which did precipitate themselves together with the Gold. For the *Aqua Regia* by its acidity hath mortified the salt of Tartar, and robbed it of its vertues so, that it could not choose but let fall the assumed pebles or sand; on the other side, the salt of Tartar which was in the liquor of pebles, hath annihilated the sharpness of the *Aqua Regia*, so that it could not keep the dissolved gold any longer, whereby both the gold and the pebles are freed from their dissolver.

This edulcorated and dryed yellow powder put into a clean crucible, and set it between live coals, that it begin to be red hot, but not long, and the yellow will be changed into the fairest purple colour,

which is pleasant to behold, but if you let it stand longer, then the purple colour vanisheth, and it turns to a brown and brick colour: and therefore if you desire to have a fair purple coloured gold, you must take it off from the fire, as soon as it is come to that colour, and let it not stand any longer, else it loseth that colour again.

This fair gold-powder may be used by the rich (which are able to pay for it) from Ɔi to ʒ*ss.* in convenient vehicles; and in all diseases, where sweating is needful: for besides the provoking of sweat, it comforteth not only the heart, but also by the vertue of the peble it expelleth the stone in the reins and bladder (if it be not grown to the height of hardness) like sand together with the urine: so that it may be safely used as well to prevent, as to cure the plague, gout and stone.

How to make further out of this purple coloured gold a soluble Ruby for medicinal use, shall be taught in the fourth part: for in regard that it must be done by a strong fire in a crucible, it doth not belong hither, but to its proper place, where other like Medicaments are taught to be made.

If you will extract the colour out of this precipitated gold, then pour upon it (before it be put into the fire for to calcin) of the strongest spirit of salt, and in a gentle heat the spirit will dissolve part of the gold, which will be much fairer and deeper in colour, than if it had been done with *Aqua Regia*: upon this solution pour five or six times as much of dephlegmed spirit of wine, and digest both together its due time, then by the digestion of a long time, part of the Gold will fall out of the solution to the bottom like a fair white pouder, which may be reduced with Borax or salt nitre and Tartar; it is

white like silver, and as heavy as other gold, and may easily get its colour again by the help of Antimony. The residue out of which the white gold is faln, *viz.* the spirit of salt mingled with the spirit of wine, must be abstracted from the Tincture, and there will remain a pleasant sowre liquor coloured by the gold, upon the bottom of the glass body, which is almost of the same vertue, which above hath been ascribed to other tinctures of gold. Especially this liquor of gold strengthneth the heart, brain, and stomach.

N. B. Sometimes there comes over with the spirit of wine a little red oyl, which the strong spirit of salt hath separated from the spirit of wine, and it is impregnated with the Tincture of Gold. It is an excellent cordial, few are found like unto it, whereby weak people decayed by sickness or age, may be kept alive a long time, they taking daily some drops of it, who else for want of the *humidum radicale*, would be forced to exchange their life for death.

Here some body may ask, whether this Tincture is to be counted or taken for a true Tincture of Gold; or whether there be another better to be found?

To which I answer, that though many may hold it to be such, and I my self do call it so here, yet that after due examination it will not prove to be such: for although some vertue is taken from the gold by this way, yet it doth still keep its life, though it be grown weak and pale, because it can so easily recover its former sound colour by a contemptible mineral: if its true Tincture or soul were gone from it, surely an inferiour mineral could not restore it to life, but of necessity there would be required such a thing for to do it, which hath not only so much, as it hath need of for it self, but hath a transcendent

power to give life unto dead things. As we may see by a man or any sensible beast, that if they have lost their vigor by adversities, in that no life more is perceived in them, yet by medicines fit for the purpose, they may be refreshed, and brought to their former health, so that their former disease appeareth no more in them: but if their soul be once gone, the dead body can by no medicines be restored unto life again, but must remain dead so long, till he in whose power it is to give and to take life, have mercy upon it. So likewise it is to be understood of gold, when its colour is taken from it, and yet its life is left, which by the help of Antimony, being its medicine, as also by the help of iron or copper can be restored unto it, so that it recovereth its former fair colours, so that you cannot see at all, that it ailed any thing before. But if its life be gone from the body, it is impossible for any ordinary metal or mineral to restore it to life, but it must be done by such a thing, which is more than Gold it self hath been: for even as a living man cannot give life unto a dead man, but GOD must do it who hath created man; so Gold cannot restore to dead Gold, the life which hath been taken from it, and how could it then be done by an unfixt mineral? But there is required a true Philosopher for to do it, such a one as hath good knowledge of gold and its composition.

Now as we heard that like cannot help its like, but he that shall help, must be more, than he that looks for help from him: Hence it is evident, that the Tincture, whose remaining body (from which it is taken) is still gold, can be no true tincture; for if it shall be a true tincture, it must consist in its three principles, and how can it consist therein, the body from whence it came being yet alive, and possessing invisibly all its three principles? How can a mans

soul be taken from him, and yet the body live still? Some will say, that for all that, this may be counted a true tincture, although the body still remain gold, and have kept its life: even as man may spare some blood out of his body, which though it will make him somewhat pale, yet he liveth still, and the lost blood may be supplyed again by good meat and drink. But what lame and senseless objections are these? Who would be so simple as to think, that a handful of blood may be compared to a mans life? I believe no wise man will do it. Although life goeth forth with the blood, yet the blood is not the life it self; else the dead could be raised thereby, if a cup full of it were poured into a dead body; but where was such a thing ever heard or seen? With such groundless opinions some did presume to censure the truth, set down in my treatise *de Auro potabili vero*, saying, *Geber* and *Lullius* were also of opinion, that a true tincture can be extracted out of gold, the same nevertheless remaining good gold: but it may be asked, what it hath lost then for to yield a true Tincture, since it remained good gold? Here no body will be at home for to answer I doubt. What are the Writings of *Geber* or *Lully* to me? What they have written I do not despise, they were highly enlightned and experienced Philosophers, and would defend their writings sufficiently, if they were alive: and what I write, I am also able to maintain.

Do those men think, that the writings of *Geber* and *Lully* are to be understood according unto the bare letter? shew me a tincture of gold which was made by the writings of *Geber* or *Lully*? if it were so, then every idiot or novice, that could but read Latine, would not only by their writings be able to make the Tincture of gold, but also the Philosophers stone it self, whereof they have written at large; which doth

not follow, because it is seen by daily experience, that the most worldly learned men spent many years, and have been at vast charges, and taken great pains, and studied in their books day and night, and found not the least thing in them.

Now if such Philosophers were to be understood literally, doubtless there would not be so many poor decay'd Alchymists. Therefore the writings of such worthies are not to be understood according to the letter, but according to the mystical sense hid under the letter.

But because the truth is eclipsed in their books by so many seducing and sophistical processes, there will hardly any man be able to pick it out from so many seducements, unless a light from God be given to him first, whereby he may be able so to peruse the dark writings of those men, that he know how to separate the parabolical speeches, from those that are true in the letter it self: or if an honest Godly Chymist by the grace of God in his labours do hit upon the right steps, and yet do doubt, whether he be in the right way or no, then by reading of good and true Philosophers books, he may at last learn out of them the firm and constant truth: else hardly any ones desire may be obtained out of their books, but rather after the pretious time spent, means and health wasted, a man shall be forced to fall a begging at last.

In like manner, if the true tincture be taken from Copper, the rest is no more a metal, nor by any Art or force of fire can be reduced to a metallical substance.

N. B. But if you leave some tincture in it, then it may be reduced into a brittle gray body, like unto iron, but brittle.

Another way to extract a good Tincture out of gold by the help of the liquor of sand or pebles.

Take of that gold calx (which was precipitated with the oyl of sand) one part, and three or four parts of the liquor of crystals or of sand, mix the gold calx in a good crucible with the liquor, and set this mixture into a gentle heat, so that the moystness may evaporate from the oyl of sand which is not easily done; for the peble or sand, by reason of their dryness keep and hold the moystness, and will not let it go easily; it riseth in the pot or crucible, as borax or Allome doth when you calcine them; therefore the crucible, must not be filled above half, that the liquor together with the gold may have room enough, and do not run over the pot: and when it riseth no more, then strengthen the fire, till the pot be red-hot. The mixture standing fast, put a lid upon it, which may close well, that no coals, ashes, or other impurity may fall into it, and give it so strong fire in a winde furnace, that the liquor together with the gold calx may melt like water; keep it melting so long, till the liquor and gold together be like unto a transparent fair ruby, which will be done in an hours time or thereabouts; then pour it forth into a clean copper morter, let it cool, and then make it into powder, and pour spirit of wine upon it for to extract, which will look like unto thin blood: and will prove more effectual in use, than the above described Tincture.

The residue from which the Tincture is extracted, must be boyled with lead, and precipitated and driven off as you do oares, and you will get the remaining gold, which went not into the spirit of wine; but it is very pale and turned like unto silver in colour, which if it be melted by Antimony, it

recovereth its former colour without any considerable loss in the weight. How the melting in crucibles, and boyling of the remaining gold is to be done, shall be more punctually set down in the fourth part; I know several other fine processes, for to extract the colour easily out of gold; but because the gold must be first made fit for it by melting in a crucible, and that it is not pertinent to speak of that operation here in this second part, therefore it shall be reserved for the fourth, where you shall be informed at large, not onely how to prepare Gold, Antimony and other minerals, and make them fit for extraction, but also how to reduce them into a transparent, soluble and fire-proof Ruby (which are none of the meanest medicines) and as it was done here with the gold, so you may proceed likewise with other metals and minerals for to extract their colours. And therefore being needless to describe each metals tincture by it self, all the processes of them shall be disclosed in one, *viz.* in that of gold. The book would grow too big, if I should describe them severally, which I count needless to do. Let this suffice for this Second part, that we have taught, how to extract out of the gold its colour after a common way. Which indeed are good medicines, but for ought I know of no use in Alchymy. But he that seeketh to have a true Tincture out of gold, let him endeavour first to destroy the gold by the universal Mercury, and to turn the inside outward, and the outside inward, and proceed further according unto art, then the soul of gold will easily joyn it self with the spirit of wine, and come to be a good medicine, whereof more in my treatise *de auro potabili* is handled. If one know the *Chalybs* of *Sandivogius*, which is well to be had, he might with little labour quickly get a good medicine: but because we shew

our selves still ungrateful children unto God, therefore it is no marvel, that he withdraweth his hand from us, and leaveth us in errors.

What further may be done with the liquor of pebles.

Many more profitable things, as well in Alchymy, as in medicine, may be compassed by the oyl of sand; as for example, to make fair painting colours out of metals, which abide in all elements: Also to frame all sorts of transparent hard stones out of crystal, which in beauty are like unto the natural, yea fairer sometimes; also how to make many fair Amauses or Enamels and the like profitable arts: but they belonging not to this second part, shall be reserved for the fourth, where all such shall be taught very punctually with all the circumstances thereunto relating.

How by the help of this liquor to make trees to grow out of metals, with their colours.

Although this process in Physick may be of no great use: yet in regard that to a Chymical Physitian it gives good information of the condition of natural things, and their change. I thought it not amiss to set it down here.

Take of the above described oyl made of sand, pebles or crystals as much as you please, mix therewith a like quantity of the lixivium of Tartar, shake both well together, so that the thick liquor may not be perceived in the lixivium, but be throughly incorporated therewith, both being turned to a thin solution, and then your water is prepared, wherein the metals do grow.

The metals must be first dissolved in their proper corrosive *Menstruums*, and the *Menstruum* must be quite abstracted from thence again, but not too near, that the calx of the metal may not grow red-hot, whereby its growing vertue would be taken from it. Then take it out of the little glass-body, and break it in pieces about the bigness of a pulse, and put them in the above described liquor in a cleer bright glass, that the growing of the metals may be discerned through it; and as soon as the prepared metals are taken out of the glass body, they must be kept from the aire, else they lose their growing vertue. Therefore thus dry they must be broken in pieces, and laid in the bottom of the glass (wherein the liquor is) a fingers breadth one from another asunder, and must not be laid together on a heap. The glass must stand still in a quiet place, and the metal will presently swell in it, and thrust forth some bulks, out of which branches and twigs do grow, so finely, that one shall admire at it; and let none think that this growing serveth only for to please the eye, for some special thing is hid in it; for all sand or pebles, although they be white, invisibly containeth a hidden tincture or golden sulphur, which none without experience will be able to believe; for if for a time you digest the pure filings of lead in it, there will gold come to stick to the outside thereof (which gold may be washed off with water) and the lead will look as if it were gilded. Which gold came from no where else but from the sand or pebles, although they were white and clear, so that it could not be perceived in them. It sheweth also its meliorating vertue, when the metals do grow therein, and for a certain space of time are digested therewith. For it may be seen apparently, that the metals in the growing do increase from this liquor, and attract

what is for their turn; which hence also may be perceived, that when but as much as the bigness of a pea groweth therein, it will grow twice or thrice as big, which is worthy to be considered of. Also the pebles or sand-stones are the natural matrixes of metals, and there appeareth a great sympathy between them, especially between the unripe metals and them; as if nature should say to such raw or unripe metals, return into your mothers womb, and stay there the due time, till you have attained there to perfect ripeness, for you were taken thence too soon against my will. Further, out of this liquor there may be made a good borras to reduce the metals thereby. There may be made also with this liquor fair glased and firm colours upon earthen vessels like unto Porcellan or China. Also by boyling it with water, a tender impalpable snow-white earth may be precipitated out of it, whereof there may be made vessels like unto Porcellan.

Many other useful things may be brought to pass thereby in mechanical businesses, needless here to relate.

Also the unripe and volatile minerals may be fixed and ripened thereby, so that not only they may be the fitter to be used in Physick, but also the volatile gold and silver contained in them may be saved thereby, whereof more in the fourth part.

N. B. Hither belongs also the process of the spirit of lead, Virgins-milk and Dragons blood.

Of the spirit of urine and of the volatile spirit of salt Armoniack.

Out of urine or salt Armoniack, a powerful and penetrating spirit may be made several wayes, which

not only is to be used in phisick for many diseases, but is also found very useful in mechanical and chymical operations, as followeth.

Take of the urine of sound men living chast, gather a good quantity together in a wooden vessel, let it stand for its time to putrefy, and distil a spirit thereof, which afterward in a great glass retort with a wide neck must be rectified from calcined tartar, and still that which cometh over first, may be saved by it self, and so the second and third also, the strongest may be used for the preparing of metallical medicines, and the weaker for a medicine alone by its self, or else mingled with fit vehicles: The salt which in the rectification cometh over with the strongest spirit; may be put to the weakest, to make it the stronger, or else it may be saved by it self in a good strong glass.

But because the spirit of urine is tedious to make, therefore I will shew, how to get it easier out of salt Armoniack. The preparation is thus.

Take of salt armoniack, and *lapis calaminaris*, and make each by it self into powder, and then mix them together, and cast of it into the red hot vessel at once no more than ʒ *ss.* or ʒ i. Unto the vessel there must be applyed a great receiver: for this spirit goeth with such a force and power, that it were impossible to distil it in a retort without danger or loss, for I broke more than one receiver with it, before I did invent this instrument. The spirits being well setled in the receiver, cast in more of your mixture; this continue so long till all your matter is cast in; then take off the receiver, and pour the spirit into a strong glass, which must be well closed at the top, but not with wax and a bladder, because it softeneth the wax, and doth penetrate through the bladder; but first stop it

with paper, then melt Lacca or sulphur, and pour it upon it, so that it come to be very well closed, and then it will not be able to exhale, or thou mayst get such glasses made, as in the fifth part shall be taught, for to keep all the subtle spirits in them, for more security sake. And this spirit, if no water have been mixt with it in the receiver, needeth no rectifying: but he that will have it stronger yet, may rectify it by a glass retort, and so keep it for use.

And this is the best way to make a strong spirit out of salt armoniack: the same may be done also, by taking of filed Zinck, instead of *lapis calaminaris*: also by adding of salt of tartar, salt made of the Lee of wood ashes, unquencht lime, and the like: but the spirit is nothing near so strong (although all those things may be done with it, that are done with the former) as that which is made with *lapis calaminaris* or Zinck.

The process or the manner of making it, is this:

Take ℔ i. of salt armoniack made into powder, and as much of salt of tartar, mix both together by the help of a lye made of tartar, or only with common water, so that all come to be like a pap, and cast in one spoonful thereof at once, into the distilling vessel, then cast in more till you have spirit enough.

N. B. The salt of tartar may also be mixed dry with the salt Armoniack without any lye or water, and so distilled: but it is not so good, as when the mixture is tempered with lye or water: for if it be cast in dry, the spirit will come over in the form of a volatile salt: but if the mixture have been moistened, then most part thereof will come over like a fiery burning spirit: In like manner also the mixture of Lyme and salt Armoniack may be tempered moist, and it will

yield more spirit than if it be distilled dry.

It may be asked: why *lapis calaminaris*, Zinck and unquencht lyme, calcined tartar, salt of potashes, fixed salt nitre or the like things prepared by the fire, must be added unto salt Armoniack, and whether it be not as good to add some bolus, or other earth (as usually is done to other salts) and so to distil a spirit of it? To which I answer, that there are two sorts of salt in salt Armoniack, *viz.* a common acid salt, and a volatile salt of urine, which without mortifying of one of them, cannot be separated: for as soon as they feel the heat, the volatile salt of urine carrieth the acid salt upwards, and they both together yield a sublimate, of the same nature and essence with common salt armoniack which is not sublimed, onely it is purer than the common. And no spirit would come over from it, if it should be mingled with bole, brick, dust, sand, or any other strengthless earth, and so distilled, but the whole salt as it is of it self (leaving its earthy substance behind) would sublime thus dry: but that it falleth out otherwise with the *lapis calaminaris* (which is also like an earth) so that a separation of the salts is wrought thereby, and a volatile spirit cometh over; the reason is, that the *lapis calaminaris* and Zinck are of such a nature, that they have a great affinity with all acid things, and do love them, and are loved by them likewise (whereof some mention hath been made in the first part) so that the acid salt sticks to it in the warmth, and uniteth it self with it, and the volatile salt is set free, and distilled into a subtle spirit; which could not have been done, if the acid salt had not been kept back, by the *lapis calaminaris* or Zink. But that a spirit is distilled off by addition of fixed salts; the reason is that fixed salts are contrary unto acid salts, and (if they get the uperhand) do kill the same, and

rob them of their strength, whereby those things which are mixed with them are freed from their bond: and so it falls out here with salt armoniack, that when by addition of a vegetable fixed salt, the acidity of the salt armoniack is killed; the salt of urine, which formerly was bound therewith, gets its former freedome and strength, and being sublimed turns into a spirit. Which could not have been done, if common salt had been added to the salt armoniack instead of salt of tartar; for the salt of urine would thereby (as by a far greater enemy) be killed and kept back, so that it could yield no spirit. I thought fit to give notice hereof to the ignorant (not for those, who knew it before) and to the unknowing it will do much good, and that they may have a light for other labours: for I have many times seen, and see it still by daily experience, that the most part of vulgar Chymists, whatsoever they do (having got it either by reading, seeing, or hearing) they hurle it over like botchers, and are not able to give any solid reason, why this or that must fall out in such or another manner, not labouring to find out the natures and conditions of salts, minerals, and other materials, but contenting themselves onely with the Receipt, saying this or that Author hath written so, and therefore it must be so, whereas many times such books are patcht up out of all sorts of authors. And those that stick to so many books, will hardly ever come to get any good, but are led out of one Labyrinth into another, spending their life miserably in watching and cares: but if they would first seriously consider things, and learn to know nature, and then take their work in hand, then they would sooner attain unto true knowledge; and so much of this matter by the way. I hope that he that hath been in error will be pleased with it, and the knowing will

not grudge to have it imparted to the ignorant.

That which remains after the distillation is done, is also good for use; if the addition have been of salt of tartar, a melting powder may be made of it, to reduce metals. Of *lapis calaminaris* or Zinck, yields *per deliquium* a clear, white, and heavy sharp oyl, for the sharper part of salt armoniack, which did not turn to spirit, hath dissolved *lapis calaminaris*, and is almost of the same vertues for external use in Chyrurgery with that, which above in the first part which was taught to be made out of *lapis calaminaris*, and spirit of salt, save only that this in the distilling doth not yield so strong a spirit as the other, but onely yields a sharp sublimate.

Of the use and vertue of the spirit of salt Armoniack.

This spirit is of a sharp penetrating essence, and of an airy, moist, and warm nature; and therefore may with credit be used in many diseases, 8, 10, 12. (more or less) drops thereof used in a convenient vehicle, do immediately penetrate all the body over, causing sudden sweating, opening the obstructions of the spleen, and dispersing and expelling many malignities by sweat and urine, it cureth the quartane, collick, the suffocation of the Matrix, and many more diseases.

In brief, this spirit is a safe, sure, and ready medicine for to disperse and expel all tough, gross and venemous humors. Also, this spirit acteth his part externally, quenching all inflammations, curing the Erysipelas and Grangrene; it allayeth the pains of the gout, clothes being dipt in it and applyed: and although it draw blisters, it matters not; laid to the pulse, it is good in ardent feavers, it asswageth swellings and pains; disscusseth congealed blood,

helpeth strained limbs, and benummed nerves: onely smelled unto, it cureth the megrim, and other Chronical diseases of the head: for it dissolveth the peccant matter, and evacuateth it through the nostrils; it restoreth the lost hearing, being externally laid on with a little instrument fit for the purpose. Also in the obstructions of womens courses applyed by a fit instrument in a spiritual way, openeth presently, and cleanseth the womb, and maketh women fruitful, *&c.* Mingled with common water, and held in the mouth, asswageth the tooth-ach, proceeding from sharp humors which are falln in the teeth. A little of it applyed in a glister, killeth the wormes in the body, and allayeth the colick.

This spirit may also further be used to many other things, especially by means thereof many pretious and effectual medicaments may be made out of metals and minerals, whereof some shall be described as followeth.

N. B. There is yet another matter, which is found every where and at all times, and is to be got by every one without distillation and charges, and is as good for the abovesaid diseases, as the distilled spirit, and if all men knew it, there would not be found every where so many sick people, nor so many Doctors and Apothecaries.

To distill a blood red oyl of vitriol by the help of the spirit of urin.

Dissolve Hungarian or other good vitriol in common water, and let it run through a filtring paper, pour of this spirit upon it so much, till all the green be vanisht, and the water be made clear, and a yellow sulphur be settled: then pour off the clear, and the rest which is muddy, pour together in a *filtrum*, that

the moisture may run off, and the earth of the vitriol remain in the paper, which you must dry, and distil to a blood-red oyl, which will open the obstructions of the whole body, and perfectly cure the epilepsie. The clear water must be evaporated dry, and there will remain a salt, which being distilled, yields a wonderful spirit. Before it be distilled, it is a *specificum purgans*, whereof 8. 10. 12. to 24. grains taken, may safely be used in all diseases.

The Tincture of Vegetables.

Spices, seeds or flowers being extracted therewith and digested and distilled, the essence of them will come over with it, in the form of a red oyl.

Vitriol of copper.

If you pour it upon calx of copper, made by often heating the Copper red hot and quenching it again, it will extract within an hours time a fair blew colour, and having dissolved as much thereof as it can pour it off and let it shoot in a cold place, and you will get a fair sky coloured vitriol, a small quantity whereof will cause strong vomits; the rest of the vitriol remaineth a blew oyl, good to be used in ulcers.

The Tincture of crude Tartar.

If you take common crude tartar, and pour of this spirit upon it, and set it in digestion, the spirit will extract a blood-red tincture, and if the spirit be abstracted from it, there will remain a pleasant red oyl, of no small vertue and power.

To make the oyls or liquors of salts.

This spirit also dissolveth crystals and other stones,

they being first dissolved, precipitated and reduced to impalpable powders, turning them into oyles and liquors, good to be used in Alchymy and Physick.

To precipitate all metals with it.

Any metal being dissolved in an acid spirit may be precipitated better and purer therewith, than with the liquor of the salt of tartar; for *Aurum fulminans* which is precipitated with it fulminateth far stronger than if it were done with oyl of tartar.

R. Some juyce of Lemon and mix it with the solution of gold, before it be precipitated, and then not all the gold will precipitate, but some of it will remain in the solution, and in time many small green stones (not unlike unto common vitriol) will appear; which in a small dose will purge all noxious humors.

The oyl and vitriol of silver.

If you dissolve silver in *Aqua fortis*, and pour so much of this spirit into it till it ceaseth to make a noise, some of the silver will precipitate in the form of a black powder, the rest of the silver remaineth in the liquor: the phlegm abstracted from it in Balneo, till it get a skin at the top, and then set into a cool place, there will grow white crystals in it, which being taken out and dryed are a good purge in madness, dropsie, feavers and other diseases, safely and without danger to be used to young and old. The rest of the liquor which did not crystallise may be extracted with spirit of wine, and the fæces being cast away the extraction will be pleasanter. The spirit of wine abstracted from it, there will remain a medicine of no small value in all diseases of the brain.

To extract a red Tincture out of Antimony or common sulphur.

Boyl sulphur or Antimony made into powder in a Lixivium of salt of tartar, till it turn red, and pour this spirit upon it, and distill gently in a *Balneum*, and there will come over a fair tincture with the volatile spirit, silver anointed therewith will be guilt, though not lastingly. It serveth for all diseases of the lungs.

How to ripen Antimony and common sulphur, so that several sorts of such smels, as vegetables have, arise from thence.

Dissolve Antimony or sulphur in the liquor of pebles or sand, coagulate the solution to a red mass; upon this mass pour spirit of urin, and let it extract in a gentle warmth. The spirit being coloured red, pour it off, and pour on other spirit, let it extract likewise, and this you must iterate so often, till the spirit will extract no more tincture; then pour all the extracts together and abstract the spirit of urin from it in Balneum through a limbeck, and there will remain a blood red liquor, and if you pour upon this spirit of wine it will extract a fairer tincture then the former was, leaving the fæces behind, and this tincture smelleth like garlick: and if it be digested three or four weeks in a gentle warmth, it will get a very pleasant smel, like unto the yellow prunes or plums: and if it remain longer yet in digestion, it will get a smel not inferior to musk and ambar; This tincture having been digested a long time, and got several smels, is not only notably by the fire increased in pleasantness of smel and taste, but also in vertue: for so many and various sweet smels are perceived in it, that it is to be admired, which variety and exaltation

proceedeth only from the pure and ripening spirit of urin, for there is hid in it a fire, which doth not destroy but preserve and graduate all colours, whereof in another place more shall be said.

N. B. Betwixt the spirit of urin and the animal and mineral Copper there appeareth a great sympathy; for it doth not only love copper above all other metals, and mingleth easily with it, and maketh it extraordinary fair, and of good use in Physick, but it prepareth it also to such a medicine, whereby all venerous sores (both by inward and outward use) how deep so ever they took root in the blood, without the use of any other medicaments, are perfectly cured; it maketh fruitful and barren, according as it is used; it cleanseth the matrix, hindreth the rising thereof, and miraculously furthereth womens courses that have been stayed, above all other medicaments of what name soever.

If this spirit be mingled with the volatile (but not corrosive) spirit of vitriol or common salt there will come a salt out of it, which is inferior to none in fusibleness, and useful both in Alchymy and Physick.

N. B. The liquor of the salt Of tartar, and the spirit of wine do not mix without water, this being the mean partaking of both of their natures, and if you add unto it spirit of urin it will not mingle but keep its own place: so that these three sorts of liquors, being put in the same glass, and though they be shaked never so much will not incorporate for all that: the liquor of the salt of tartar keepeth to the bottom, next to it will be the spirit of urin, and on the top of that is the spirit of wine: and if you pour a distilled oyl upon it, that will keep uppermost of all, so that you may keep four sorts of liquors in one glass, whereof none is mingled with the other.

Although this be of no great profit, yet it serveth for to learn thereby the difference of spirits.

Of the spirit and oyl of Harts-horn.

Take Harts-horn, cut it with a saw into pieces, of the bigness of a finger, and cast in one at a time into the aforesaid distilling vessel, and when the spirits are settled, then another, and continue this until you have spirits enough: and the vessel being filled with the pieces that were cast in, take them out with the tongs, and cast in others, and do this as often as is needful. The distilling being finished, take off the receiver, and pour into it dephlegmed spirit of wine, which will cleanse the volatile salt: pour the oyl with the spirit and volatile salt through a filtring paper made wet first and lying in a glass funnel, and the spirit of wine together with the spirit of Harts-horn and the volatile salt will run through the paper, and the blackish oyl will stay behind, but it must quickly be poured out, else it will pass through after them. The spirit together with the volatile salt rectifie through a retort, and the best part of the spirit will come over together with the spirit of wine and volatile salt; and when the phlegme is coming, take of the spirit, which is come over, that the naughty phlegm may not come amongst it; keep it well, for it is very volatile, the oyl may be mingled with salt of tartar, and rectified by a glass retort, and so it will be clear; if you will have it fairer, you must rectify it with spirit of salt.

The first, which is done with salt of Tartar, is of more vertue; it cureth the Quartane, and provoketh sweat extremly, cureth all internal wounds and pains, which were caused by falls, blows, or other wayes: 6, or 8. 10, to 20. drops of it taken in wine

and sweated upon it in the bed. The spirit is very good for all obstructions of the whole body, from ℈ *ss.* to ʒ *ss.* therefore taken in a fit vehicle, provoketh urine, and forceth down womens courses, it cleanseth the blood and maketh sweat mightily. In the Plague, Pox, Leprosie, Scurvy, *Melancholia Hypochondriaca*, malignant Feavers, and the like where sweating is necessary, it proveth a rare medicine.

To make the spirit of mans hair an excellent medicine.

After the same manner you may make spirits out of all kind of horns and claws of beasts: but since by reason of their ill smel the use of them is not liked of (though in several heavy diseases, as in the fits of the mother and Epilepsie, they do admirably well:) therefore I will acquiesce. However it is worth observing, that the spirit made of mans hair is not to be rejected in metallical operations, for it dissolveth common sulphur, and reduceth it into a milk, which by further ripening may be turned into blood, the like whereunto no spirit is able to do. The same spirit may also of it self, without addition of sulphur be fixed into a ruby; but that which is ripened with sulphur is the better; and if it be brought so far by the fire, that it have lost its stink, and be made fixed than it will be able sufficiently to pay for the pains and coals bestowed upon it.

N. B. Hither belongeth the Process to pour dissolved metals upon filed hartshorn, and so to distil them.

Of the oyl of Ambar.

Ambar yeildeth a very pleasant oyl and of great vertue especially the white Ambar: the yellow is not so

good, and the black is inferior to this; for by reason of its impurity it cannot be well used inwardly; and there cometh over also along with it a volatile salt and an acid water, which must be seperated; the water (for ought that I know) is of little vertue; the salt if it be sublimed from the salt of Tartar and purified, is a good diuretick, and in the Stone and the Gout, may successfully be used both inwardly and outwardly. The oyl if it be rectified, especially that which comes over first, is an excellent medicine against the Plague, Epilepsy, rising of the Mother and Megrim, 6, 8, 10, to 20. drops being taken thereof at once, and the nostrils also being anoynted therewith for to smell to it; and it is to be observed, that when it is rectified with spirit of salt, it proveth much clearer, than done by it self without addition: but if it be rectified with salt of tartar, it is of much more vertue, though it fall not so clear, as that which is done by spirit of salt.

N. B. If it be rectified from a strong *Aqua Regia* having before once already been rectified with spirit of salt, it will turn so subtle, that it is able to dissolve iron or copper in some sort, and to reduce them into good medicines; and in this second rectification by *Aqua Regia* all will not come over, but part of it will be coagulated by the corrosive water, so that it turneth thick, like unto mastich, which in the warmth is soft, and may be handled with owns fingers like wax, but in the could it is so hard, that it may be broken and made into powder, and glistereth like gold.

Of the oyl of soot.

Of the soot, which is taken from Chimneys, where nothing is burnt but wood, there may be distilled a

sharp volatile salt and a hot oyl. The salt is in vertue not unlike unto that which is made of harts-horn or ambar, and it quencheth inflammation, from what cause so ever it do proceed: The oyl may without rectification externally be used very successfully for all loathsome scabs, and for a scald head, *&c.* But if it be rectified, as hath been taught to be done with the oyl of Tartar, of Ambar, and of Hartshorn; then it may safely be used inwardly, as the above written oyls are used; for it doth as well as these, yea better in some special cases.

How to make a good oyl out of soot without distilling.

Boyl the soot in common watter, till the water turn blood red (urin is better than water) and set this solution (being in an earthen pot) in winter time into the greatest frost so long till all in the pot be frozen into one piece and turned white: then break the pot and the ice, and in the midst thereof you will find the hot oyl unfrozen and liquid in colour like blood, which is not much inferior in vertue unto that which is distilled, yet afterward it may be rectified, and so exalted in its vertue, when you please, and it is to be noted, that this separation doeth only succeed in the greatest frost and cold, and not else.

Of the spirit and oyl of honey.

Of honey there may be made a subtle spirit and a sowre vinegar, if it be mingled with twice as much of pure calcined sand and so distilled; and it falleth much better yet if it be made with the flores of Antimony, which were taught to be made in the first part, whereby the spirit is increased in its vertue, and its running over hindred thereby; and so distilling it, there will come over a pleasant spirit, a sharp

vinegar and some red oyl also, which must be seperated: the spirit after the rectification inwardly used is good in all diseases of the lungs. It openeth and inlargeth the Breast, strengthneth the Heart, takes away all obstructions of the Liver and Spleen; it dissolveth and expelleth the Stone, resisteth all putrefaction of the Blood; preserveth from, and cureth the Plague; all Agues, Dropsies, and many other diseases, daily used from ℈ j. to ʒ j. taken with distilled water proper for the diseases: the sower vinegar coloureth hair and nails as yellow as gold: it cureth the itch and scabs of the skin; it cleanseth and healeth old and new wounds, they being bathed and washed therewith.

The red oyl is too strong to be used of it self, it may be mingled with the subtle spirit which came over first and so used, and the spirit will be exalted thereby in its vertue.

Of the oyl and spirit of sugar.

In the same manner as hath been taught of honey, there is also made a spirit and oyl of sugar, *viz.* adding pure sand to it; or (which is better) of the flores of Antimony, and then according to the rules of Art one spoonful after the other of this mixture cast in, it will yeild a yellow spirit, and a little red oyl, which after the distillation must be digested in Balneo so long together, till the spirit have assumed the oyl and be turned thereby very red in colour; it needeth not to be rectified, but may daily be used either by it self, or with such vehicles as are proper for your purpose; in all it is like in virtue unto that which was made of honey; yet this of sugar is more pleasant than the other; it reneweth and restoreth all the blood in man, in regard that it received great

vertue from the diaphoretical flores of Antimony; and this spirit may fitly be used in all diseases, it can do no hurt, neither in cold nor hot diseases; it doth help nature mightily, and doth so much good, that it is almost beyond belief. Especially if for a time it be used daily from ℈ j. to ʒ j. The residue of it is black, and may be kept for the same use again, *viz.* for an addition to other honey or sugar, or else you may sublime it again into flores in the furnace described in the first part, or in the furnace described in the fourth part of this book, with an addition of iron or tartar, or salt nitre, reduces it into a *Regulas*, &c.

To distil an excellent spirit and a blood red tincture of corals and sugar.

If you mix sugar with red corals made into powder and distil it, there will besides the spirit come over a blood-red tincture like a heavy oyl, which is to be joyned with the spirit by digestion in Balneo, and it will be as vertuous as that which was made with Antimony diaphoreticum. It doth perfectly and lastingly cure the epilepsie in young and old; it cleanseth the blood from all filth, so that the Leprosie together with its several species may be cured thereby, *&c.* Its use is the same as was taught above of the Antimonized spirit of sugar.

Of the spirit of Muste or new Wine.

Take sweet Must or juice of grapes, as soon as it is squeezed out, boyl it to the consistency of honey- and then mix it with sand, corals, or (which is better) with flores of Antimony, and so distill it, and it will yield such another spirit as that which is made of honey or sugar, only that this is somewhat tarter than that of honey. With honey, sugar and the juice

of grapes, several metals may be dissolved in boyling and so prepared and made up into divers medicaments, both with and without distillation, after the same manner as was taught above with tartar: for honey, sugar, and the juice of grapes, are nothing else but a sweet salt, which by fermentation and addition of some sower thing, may be changed into a sower Tartar, in all like unto that which is gathered in the wine vessels. There may be made also a tartar out of cherries, pears, apples, figs, and all other fruit, yielding a sweet juice; as also of rye, wheat, oats, barley and the like, whereof in the third part more shall be said.

For every sweet liquor of vegetables, if it be turned inside out, by fermentation may be changed to a natural sowre tartar; and it is utterly false, that (as some do suppose) only wine yields tartar, which by daily use made of it by those that have very hungry stomachs (like Woolves) indistinctly together with the nourishment went into the limbs, and there turned to a stony matter. If this were true, than in cold Countries, where no wine groweth, men would not be troubled with the Gout or Stone; the Contrary whereof is seen daily: though I must confess, that among all vegetables none yeildeth more than the vine, the concurrent acidity being the cause thereof; for it turneth the sweetness into tartar; for the sowrer the wine is, the more tartar it yieldeth; and so much the sweeter, so much the less tartar. By this discourse an industrious Chymist may easily come to know the original nature and properties of tartar, and in default of wine, how to make it out of other vegetables; common salt or the salt of tartar may be distilled with honey, sugar, or sodden wine (*sapa*) and it will yield such strong spirits, that metals may be dissolved with them, and they are not to be

despised in Physick and Alchymy.

Of oyl Olive.

Out of oyls made by expression (as oyl olive, rape oyl, wallnut oyl, hempseed oyl, linseed oyl, and the like) there may be distilled a penetrating oyl, useful both out wardly and inwardly, which is done thus: Take common potters clay not mingled with sand, frame little bals of it, as big as a pigeons or hens-egg, burn them (but not too strong) to a hard stone, so that they may attract the oyl; and when they are no more quite red-hot, but pretty hot, then throw them into oyl olive which is the best; let them lye in it, till they be quite full and drunk of the oyl, which will be done in two or three hours (some cast them red hot into the oyl, but amiss, because the oyl contracts thence an *Empyreuma*) then take them out, and cast in one or two of them at once into your distilling-vessel made red-hot, and let it go; and within a while after cast in one or two more, and continue this till you have oyl enough. If the vessel be full of the bals, take them out with the tongs or ladle, that you may proceed without let in your distillation, and in this manner you need not fear the breaking of your retort or receiver, or the burning of your oyle. The distillation being performed take off your receiver, pour the oyl that came over into a glass retort, and rectify it from calcined Allome or Vitriol, and the Allome will keep back the blackness and stink, and so the oyl will come over clear, which must be yet rectified once or twice more with fresh calcined Allome, according to the intensness of penetrating which you look for; that which cometh over first, ought still to be caught by it self, and you will get a very fair, bright and clear oyl, which is very subtle; but that which cometh after is somewhat yellow, and

not so penetrating neither as the first; and therefore it is but for external use to extract flores and herbs therewith, and to make pretious balsams for cold and moyst sores. Also you may dissolve with it Amber, Mastick, Myrrh, and the like attractive things, and with Wax and Colophony reduce it to a plaster, which will be very good in venemous sores and boyls, for to attract the poyson, and to heal them out of hand. If you dissolve in it common yellow sulphur made into powder, you will get a blood red balsom, healing all manner of scabs, and other like defects of the skin; especially when you add to it purified verdegrease, and in hot sores *Saccharum Saturni*, which in a gentle heat and by continual stirring about do easily melt and mingle therewith. It needeth not to be done in glasses, but may be done in an ordinary earthen pot or pipkin.

The use of the blessed oyl.

The first and clear is of a very penetrating nature: some drops thereof given in some *Aqua vitæ*, presently stays the collick, proceeding from winds that could not be vented; as also the rising of the mother, the navil being anointed therewith: and a cold humour being faln upon the nervs, whereby they are lamed; if you do but anoint them with this oyl, and rub it in with warm hands, it will quickly restore them, and therefore in regard of its present help, may well be called *Oleum sanctum*. If you extract plates of iron or copper with this oyl, it will turn deep red or green, and is a soveraign remedy for to warm and dry up all cold and watery sores. It consumeth allso all superfluous moisture in Wounds and ulcerous Sores, as also all other excrescencies of the skin: it healeth tettars and scald-heads, and other like defects proceeding from superfluous cold and

moisture. You may also dissolve in it Euphorbium and other hot gums, and use them against great frost, for what limb soever is anointed therewith, no frost how great soever can do it any hurt. The balsames made with gum or sulphur may be also distilled by a retort, and in some cases they are more useful than the undistilled balsame.

Of the oyl of Wax.

In the same manner may be distilled also the oyl of wax, the use whereof is in all like unto the former; and for all cold infirmities of the nerves, this is found more effectual yet than the former.

A Spirit good for the Stone.

Out of stones which are found in grapes, there may be distilled a sowre spirit, which is a certain and specifical remedy for the stone in the kidneys and bladder, and also for all pains of the gout. It is not onely to be used internally, but also externally, wetting clothes in it, and applying them to the places affected, and it will asswage and drive away the pains.

Of the spirit or acid oyl of Sulphur.

To reduce sulphur into a sowre spirit or oyl hath been sought hitherto by many, but found by few. Most of them made it in glass-bells, but got very little that way; for the glasses being quickly hot, could not hold the oyl, so that it went away in a smoak. Some thought to get it by distilling, others by dissolving, but none of all these would do the feat. Which is the reason why now-adayes it is found almost no where right, and in the Drugsters and Apothecaries shops they usually sell oyl of Vitriol instead of it, which by

far is not to be compared in vertue to the oyl of sulphur. For this is not onely of a far pleasanter sowre taste, but in efficacy also much exceeds the other. And therefore being of so great use both in Physick and Alchymy, as in all hot diseases, mingling the patients drink therewith, till it get a pleasant sowre tast, for to quench the intolerable drowth, to strengthen the stomach, to refresh the lungs and the liver: Also externally for to cure the gangreen: Also for to Chrystallise some metals thereby, and to reduce them into pleasant vitriols, useful as well in Alchymy as Physick: I thought good to set down the preparation, though it be not done in this our distilling furnace, but in another way by kindling and burning it as followeth.

Make a little furnace with a grate, upon which a strong crucible must be fastned resting on two iron bars, and it is to be ordered so that the smoak be conveighed (not above by the crucible, but) through a pipe at the side of the furnace: the crucible must be filled with sulphur even to the top; and by a coal-fire without flame be brought to burn and kept burning. Over the burning sulphur, a vessel is to be applyed of good stony earth like unto a flat dish with an high brim, wherein is alwayes cold water to be kept, and whereunto the burning sulphur doth flame: which thus burning, its fatness consumeth, and the acid last is freed and sublimed to the cold vessel, where it is dissolved by the air, and in the form of a sharp oyl runs from the hollow vessel into the receiver, which must be taken off sometime, and more sulphur supplyed instead of that which hath been consumed, to the end that the sulphur may still burn in the crucible: and beat with the flame to the cold head: and within few dayes you will get a great quantity of oyl, which else by the (*campana*) glass-bell in many

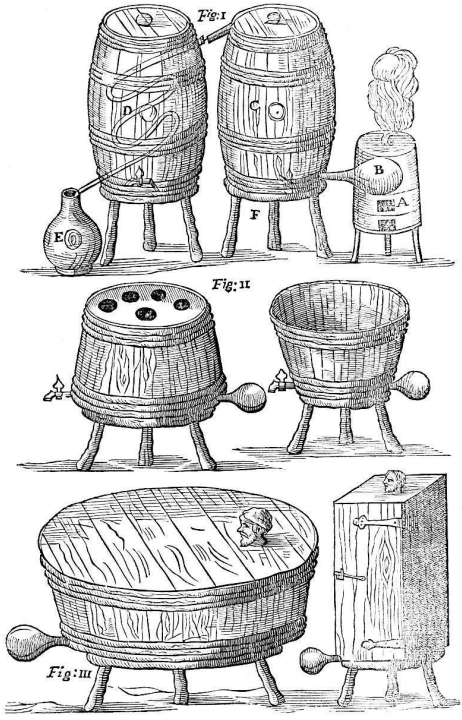
weeks could not have been done.

N. B. Such a sowre spirit or oyl may also be got by distillation together with the flores, *viz.* thus: If you take pieces of sulphur as big as hens eggs, and cast them one after another into the hot distilling vessel, a sowre oyl together with flores, will come over into the receiver, which must with water be separated out of the flores, and the water abstracted from it again in a cucurbit, and in the bottome of your glass body you will find the oyl, which in vertue and taste is equal to the former, but you get nothing near so much in quantity by this way, and if you do not look for the oyl, you may leave it with the flores, which by reason of their pleasant acid taste are much toothsomer to take than the ordinary ones.

To the Courteous Reader.

Thus I conclude this second part; I could have set down more medicinal processes in this Treatise: but having as many as will be a sufficient guide for the distilling of other things also, I thought it good here to acquiesce; and whatsoever hath been here omitted, shall be supplyed in the following parts.

FINIS.


Fig: I
D
C
B
A
F
E
Fig: II
Fig: III

THE THIRD PART OF Philosophical Furnaces:

In which is described the Nature of the Third Furnace; by the help whereof, and that without Stills, and Caldrons, and other Copper, Iron, Tin, and Leaden Instruments, various Vegetable burning Spirits, Extracts, Oyls, Salts, &c. *by the help of a certain little Copper Instrument, and Wooden Vessels are made for Chymical and Medicinal Uses.*

A Preface of the Copper Instrument and Furnace.

Now this Instrument is made of strong Copper plates after the following manner. You must make two strong hemispheares of Copper or Latten of the bigness of a mans head (or thereabout) and join them together with a most strong soder, and that without tin, whereof the one

must have a pipe: Now the pipe must be of a most exact roundness, that it may most accurately fit the hole that is made with an auger or wimble to keep the water from flowing out like to a tap, of the length of one span at least, wider on the hinder part towards the globe, than on the forepart, which also must be according to the bigness of the globe, greater or lesser, and be exactly joined with the best soder to its hemisphear, and the diameter of the forepart being very round like a tap, and most exactly filling the round hole must be of two fingers breath. Now there is required to the foresaid instrument or globe, a certain peculiar little furnace made of iron or copper, viz. *most strong copper plates, covered within with stones or the best lute, into which is put that globe like a retort, so that it may ly upon two iron bars of the distance of a span, or span and half from the grate; the neck whereof (that pipe) goeth forth of the furnace one span at least. The furnace also must have below a place for the ashes, and above a cover with its hole for the letting forth of the smoke, and for regulating the fire, as you may see by the annexed figure. It must also below have a treefoot, on which the furnace must be set, and on the sides two handles by the help whereof it may be removed from place to place; the which is very necessary; for it is not only used for the distilling of burning spirits by wooden Vessels instead of copper, but also for such distillation, and digestion that is performed in gourds, bolt-heads, and other instruments of glass, stone, copper, tin,* &c. *which are to be set in Balneo: also in the boyling of beer, metheglin, wine, and other drinks, which are to be performed by the help of wooden Vessels.*

Of Wooden Instruments that are to be used instead of Stills, Baths, and Cauldrons.

In the first Figure, *A* represents the Furnace with a Copper Globe. *B.* The Copper Globe. *C.* The distilling Vessel. *D.* The Refrigeratory with a Worm. *E.* The Receiver. *F.* Stools on which the Vessels stand. *The Second*, *A* Balneum with a Cover having Holes in it for the Glasses, set upon a Tree-foot.

The Third, A Wooden Vessel for the making of Beer. *The Fourth*, A Tub for a moist Bath, which is to be warmed by the Copper Globe. *The Fifth*, A wooden Box for a dry Bath to provoke sweat with Volatile Spirits.

In the first place I shall speak of wooden Vessels that are to be used instead of Copper stills, in the distilling of burning spirits out of wine, beer, lees, malt, wheat, meal, roots, hearbs, flowers, seeds, and other vegetables, as also oyls of vegetables.

See that thou hast an oken barrel, like to those wherein wine and beer are kept, of a just bigness, *viz.* answerable to the bigness of the globe, as is sufficient for the coction: for a barrel that is too big will make the coction slow, and tedious. A greater globe may be fitted to a lesser barrel, but not on the contrary, a great barrel to a little globe: For by how much the bigger the globe is, and the less the barrel, so much the sooner is the work hastned. Now seeing that this Art was invented for the saving of costs, which otherwise would have been expended in providing of stils, cauldrons, furnaces, *&c.* it is best not to have too great a globe, which requires a greater furnace, and is more hardly to be carryed, because it is to be covered within with lute, or a wall; for it is sufficient if it be big enough for the coction. Wherefore I will give you a just and due proportion of both, *viz.* of the globe, and vessel, which in distillations and other operations, the

curteous reader may imitate.

A globe of the bigness of a mans head, containing three or four cannes, whereof each containeth four pints, is sufficient for the heating of a barrel of 30, 40, 50, 60. and 100 gallons, which by how much the more remote from 100 and nearer to 30, so much the sooner is it heated, and the coction furthered; and on the contrary, by how much the nearer it is to 100 and more remote from 30, so much the slower is the coction. I do not therefore advise that a huge barrel be chosen for a small globe, by reason of a long and tedious operation: And if all and every thing be not so accurately observed to a hair, yet it matters not much, because it sufficeth to do the same thing by the help of one small copper instrument of divers forms. For in this way of distilling, wooden vessels that are requisite to the distilling of spirits, and boyling of Bear, and for baths are more easily provided, then so many copper vessels in the common way. For by this means not only costs are spared, but also it is in stead of building of furnaces, because when any barrel hath been used, you may remove it, and set another in the place of it for another operation, the which cannot be done with stills and cauldrons fastened into a furnace. And this invention is for those that want Artificers, as Coppersmiths, *&c.* because wooden instruments are more easily provided: also by the help of this globe may most secret operations be performed.

For the furnace with the copper globe may be built in one place, and in another place the *Balneum*, *viz.* the places divided with a wall, so that he that looks to the fire may not know what is done in the Elaboratory; for oftentimes the care of the fire is committed to heedless servants, that break glass

instruments by their carelesseness, by which means oftentimes a most pretious medicine is lost; which danger this invention is without.

Wherefore this copper globe with its wooden vessels is more convenient then those copper stills and cauldrons. But this I would have thee know that this new invented distillation is slower, then the common way which is performed by stills, and consequently requires a long fire. I desire therefore the rich that dwell in large and spacious houses, that they would use the old way of distilling; but the poor, who have but little houshold conveniences, and the covetous, that they would use this little copper globe with its wooden vessels: for although there be a longer fire required, yet these are not to be compared to those costs which are otherwise expended upon so many copper vessels of so many divers forms. Let him therefore keep to his copper vessels, who cannot understand me, for it concernes not me. Without doubt there are some whom this my new invented way of distilling will please, before other, being communicated for the sake of the poor labouring house-keepers, that cannot boyl Beer, and distill burning spirits for lack of vessels: for a globe of five or four pound is more easily provided, then other copper vessels of 60, 80, 100 pound: also those wooden vessels are more easily provided than furnaces, which some for want of place only cannot build. Choose therefore which way thou wilt, for these things which I have wrote, I have wrote for the poors sake rather than for the rich. Certainly rich men that have spacious Elaboratories need not to be ashamed to follow this way, for it is free for every man to go a shorter way, unless they had rather prefer the old way before a new and compendious, whom I cannot help, being contented with a

publication which is made for the sake of my neighbour, whether it be taken well or ill, with a good minde, certainly knowing that more profit then disprofit may be obtained by the help thereof. It shall not therefore repent him of his labor, who knows rightly to prepare and use this copper, and wooden vessels.

There follows now the preparation of the vessel.

The vessel being made is to be placed with one bottom, upon a stool that is fitted for it, which being done, make a hole with a wimble neer the bottom, for the receiving of the neck of the copper globe, which is to be covered over with a linnen cloth: make also about the lower bottom another hole for a tap, by the help whereof the remainder of the distillation is drawn forth: also you must make a large hole in the upper bottom, the diameter whereof must be one span for to pour in the water to be distilled, with a funnel. Also there must be made a hole near the upper bottom of two or three fingers breadth, into which is to be put a copper pipe of a span long, which is to be fastened closely therein; and to this pipe another oaken vessel with a copper worm and cold water like to other refrigeratories, must be applyed. Also the joints of the aforesaid short pipe, *viz.* of the first barrel, and of the second barrel, *viz.* the refrigeratory must be straightly, and closely united together, which afterward may be the better joyned together with a fit lute for the distilling. And this is the form and fashion of the wooden vessel, that is to be used in the place of copper vessels, in the distilling of burning spirits and oyls. But thou wilt object that these kind of wooden vessels are porous, and drink up great part of the spirit and oyls.

I answer; none of the spirits seeketh a violent passage out, in case the ways be open. There is no danger therefore, when there is passage enough given them by a pipe that is wide enough. Neither doth oyl stick to them in distillation, for whatsoever is by force of the boyling water to be separated from the spices, and seeds that also is sublimable by the force of the seething water, so as to distill in, so that in the refrigeratory no more is lost than in the stills. Distillation being made, the aforesaid spirits may be rectified in these wooden vessels, (being first washed) as well as in copper stills.

The making of a wooden vessel for a Balneum, which is to be used in stead of copper and leaden Cauldrons for digestion, and distillation by glass vessels.

Make an oaken vessel as big or as little as you please, according to the greatness, or littleness, multitude, or fewness of the vessels, of two or three spans high, a little narrower above then below, and so fashioned above, that a cover of wood, copper, or lead, may most closely be joyned to it: the cover must have holes greater or lesser, according to the glasses, as is wont to be in the making of a *Balneum*, as you may see by the annexed figure. This vessel also must be placed upon a stool of the height of an ell, or such height as is required for the joyning of the copper globe with the *Balneum*, which must have a hole near the lower bottom, for the receiving of the neck of the aforesaid globe. In defect of such a vessel, which yet you may provide easily enough, take a wine or bear vessel divided in the middle, and make a hole near the bottom for the neck of the globe, make also a wooden cover with holes, &c. He that will be curious may provide all things according to the best Art.

A wooden vessel serving for boyling of bear, metheglin, vinegar, &c. *as well as copper, iron, and tin vessels.*

Make a wooden vessel, which shall be more high than broad, a little wider above than below, as you please: or take a wine or bear barrel divided in the middle, and near the bottom make a hole for the neck of the globe, which is to be covered with boards, which serves as well for the boyling of bear, &c. as those of copper.

A wooden vessel for a bath for sweet, or mineral water, which may be according as you please, kept warm, for the preserving of health.

Make a long wooden tub convenient to sit in, which is to be set upon a stool of a just height, *viz.* that the bottom of the vessel may answer the neck of the globe which is put into the furnace: you may also have a cover, that may cover the whole tub, which may be divided and united in that place where the head goes forth, as appears by the annexed figure, or you may cover it with a cloth, laying it upon small crooked sticks fastned to the tub, yet so that the head may have its liberty, especially in a vaporous bath of common sweet, or medicinal water; or make a high wooden cover shutting very close, for a dry sweat, where it is no matter whether the head be shut in or no.

Of the use of wooden vessels in distilling, boyling, bathing, &c. *And first of the distilling vessel.*

He that will distill any burning spirit by help of the distilling vessel, out of wine, metheglin, bear, barley, wheat, meal, apples, pears, cherries, figs, &c. also out of flowers, seeds, and other vegetables, hath need so

to prepare his materials, that they may yield their spirit. Where I thought it convenient, and indeed necessary to say something of the preparation of each vegetable, for better information sake, or else a profitable distillation is not to be expected, but labour in vain to be feared.

And first of the preparation of the lees of wine, bear, hydromel, and other drinks.

The lees of wine, bear, hydromel, &*c.* have no need to be prepared, because they do easily enough of themselves yield their spirit, unless haply having lost all their humidity they be dryed, which you may make moist again by the admixion of common water, lest they be burnt in distilling & stick to the vessel; of which thing more in the distillation it self. Now flowers, roots, hearbs, seeds, fruits, apples, pears, cannot be distilled without a foregoing preparation. You must therefore first prepare them, as followeth.

Of the preparation of all kind of corn, as Wheat, Oats, Barly, &c. *which must go before the distilling of the spirit.*

And first of all a malt must be made of the corn, as it is wont to be in the making of bear. Now the manner of making of malt is known almost to all, wherefore I need not speak much of that, because in all places that have no wine, there is scarce any house found in which Malt and Bear is not made, as well in the country as cities. But however, there is a great deal of difference of making of it, for a long knife doth not make a good Cook, nor all drinkers of wine are good planters. For many have perswaded themselves, that, if they follow the footsteps of their fathers, they have done well (although they have been in an

errour) and being scornful, refuse instruction. Wherefore something is to be said of the difference of malting. Although I never exercised the Art of making Beer, yet I am certain I do in that excel all other Distillers, and Brewers. For I often saw, and indeed with admiration, the simplicity of many in their operations, although common, and dayly, to whom though an age should be granted, yet they would never be more thrifty, being content with their ancient customes. Good God! How perverse is the world, where no body labours to find out any good, neither is there any one that thinks of perfecting, and amending things already found out: Where all things run to ruin, and all manner of vice increase: for now almost every one seeks only after riches *by right or wrong*; for it is all one with them, if they have them, not thinking that things ill gotten shall perish, and that the third heir shall not injoy them, and that unjust riches shall devour those that have been honestly gotten, with danger also of eternal damnation. I pray you, if our Ancestors had been so negligent, and had left nothing to us: I pray you, I say, what Arts and Sciences should we have had now? It is come to this pass now, that vertues decrease, and vices increase.

Of the difference of malting.

The difference of malt, by reason whereof it yields better or worse beer, and spirit, consists for the most part in the preparation thereof: for being made after the vulgar way it retains its tast, wherefore it cannot yield good spirit, nor good beer, which is observed of very few, wherefore they could not draw forth good spirit out of corn, but such as savours of the tast and smell of the malt. Which is not the fault of the corn, but of the artificer not operating aright in the

preparation of his malt, in distilling and rectifying. For if it were prepared a right in all things, corn yields a very good spirit, not unlike to that which is made out of the lees of wine, in tast, odour, and other vertues. Which Art, although it be not known to all, yet it doth not follow that it is impossible: Now I did not say that it is that common way, whereby that spirit, which is like to the spirit of wine, is distilled, but another which is more subtil, and witty. Out of all vegetables is drawn a burning spirit, yet such as is perceived by some difference of the tast, and odour, but that is not the spirits faults, but of the vegetable, as of hearbs, seeds, corn, *&c.* communicating their vertues, tast, and odour to the spirit: whence that spirit deserves to be called not simple, but compounded, for else all the burning spirit (being rightly rectified from its flegm) is made out of any thing, having the same vertues with the spirit of wine, although it seem improbable to some. I do not deny that one simple may yield more or less sweet spirit than another. For sweeter wines yields sweeter spirits: Also clear wine yields a sweeter spirit than the lees of wine, although they come forth out of one and the same vessel: For clarified wine, and that which is separated from the fæces yields a sweeter spirit than the Lees, and impure and heterogeneal sediment, which corrupts the simple, and sweet spirit, with a strong tast and smell: so that that may deservedly, being as it were simple, be preferred before this which is accidentally corrupted. And this is to be understood of all other spirits. What hath hitherto been said, hath been spoken for the sakes of them, who have perswaded themselves that they could not perform chymical operations so well by the spirit of corn, as with the spirit of wine, for I never found any difference of them in the extraction

of minerals or vegetables. Let him therefore that can, receive my opinion, and experience, seeing I will have nothing to do with contradicting Carpers: Without hurt to others I dare not reveal the Art of distilling a sweet spirit with great profit out of corn, in all things like to that which is made of the fæces of wine, *viz.* without the preparation or grinding of the malt, which shall haply be [* *See Explicat. Mirac. Mundi*] communicated elsewhere at some time or other. For this Book is not written for the publishing of secrets, but of a new invented distillation. But thou that wilt make a sweet burning spirit out of malt or honey; know this, that the corn must be brought after a certain peculiar manner into malt, and lose its ungrateful savour before its distilling, and fermenting, or else after the wonted manner a certain ungrateful spirit will be drawn from thence, that cannot be compared to the spirit of wine. The whole Art thereof consists in a true preparation; for ungrateful things are by Art brought into gratefulness, and on the contrary grateful things are made ungrateful by negligence. And thus much for information sake.

Of the fermentation of Malt.

Take of Malt ground in a Mill as much as you please, upon which in a wooden vessel set up right, pour cold water, as much as will moysten it, and serve for mixtion and comminution; then also pour as much warm water as will suffice for the making the mixture moist and thin, and also warm; for it must be neither hot nor cold: which being done mix with it some new barm, and cover it with a cloth, and in a short space, being exposed to heat, it will begin to ferment (wherefore the vessel is not to be filled to the top) and leave it so long in fermentation, until

the mixture descends, which for the most part is wont to be done the third day, and the malt will be ready for distillation.

Of the fermentation of Honey.

Neither hath honey any need of a singular Art in its fermentation, because being mixed with 6, 7, 8, or 10. parts of warm water, it is dissolved, and unto the solution is added ferment, as has been spoken concerning malt, which afterward is left covered in some heat for to be fermented, being fit for distillation when it becomes to wax hot. Now know that too great a quantity of honey makes a very slow fermentation, *viz.* of some weeks and months; wherefore for acceleration sake, I advise that a greater quantity of water be added; although otherwise it yields plenty of spirits, but ungrateful, which therefore I advise nobody to distil as being unprofitable, unless any one know how to take away the [1]ungratefulness thereof.

[1] [*See the Consolat. of Navigators.*]

Of the preparation of Fruits, Seeds, Flowers, Herbs, Roots, &c.

The fruits of trees, as Cherries, Plumbs, Apples, Pears, Figs, Juniper-berries, Elder-berries, Dwarf-elder, and Mulberries, *&c.* are bruised in wooden vessels, with wooden pestils; and upon them being bruised, is poured warm water, and ferment added to quicken it, as hath been above said of malt. Seeds are broken in a mill; flowers, hearbs and roots, are cut small, and are stirred up to fermentation by mixing of warm water, and barm or yest.

An Annotation.

Before thou distil the aforesaid vegetables prepared by the help of fermentation, diligently weigh, and accurately observe whether the mixture be sufficiently fermented, for sometimes there is too much cold, or hot water put to it; sometimes the vessel is not well covered, by which means the cold air is let in, whence the fermentation is hindred, and consequently the distillation of the spirit: For by the help of fermentation the burning spirit of the vegetables is set at liberty, without which it cannot be done; also the distillation is hindred by too much hast, as well as by too much delay; for if you begin to distill before the time, *viz.* fermentation not being yet perfected, thou shalt have but few spirits; wherefore also the better part is, by many that are unskilful, cast to the swine, but without any great loss, if the matter were malt, because that swine are fed therewith; but not so if other vegetables were the matter of the distillation. Also too much slowness where the matter begins to be sowre before it be distilled, yields very few spirits, that which often happens, whilst hearbs, and flowers, *&c.* are out of ignorance left in fermentation 3, 4, 5. and more weeks, before they be distilled, for the greatest part of the spirit is then turned to vinegar, which would not be so very ill done, if so be these men knew how to clarifie the remainders, and turn it into vinegar, that nothing thereof might be lost; for the vinegars of hearbs, flowers, seeds, and roots are not to be contemned. And so often times (a thing to be lamented) the better part, if they be spices, and pretious things, is lost.

The matter of the distillation, and other choice things, as seeds and hearbs are cast away with loss; wherefore for admonition sake I was willing to add such things that the operators may have an

opportunity to consider the matter a little more profoundly with themselves, or at least of learning the art of distilling from countrymen, who do not suffer their malt to putrefy, grow sower or mouldy, before they fall upon their distillations, but presently fermentation being made (the third or the fourth day) begin their distillation.

But some one will object, that my vegetable spirits are not pure by reason of the ferment that is mixed, having in it self a spirit. I answer, there is not so great a portion of the ferment mixed which can corrupt the vegetable spirit. For although some spoonfuls of ferment yielding but a few drops of spirits be added to a great quantity of the vegetables; yet there can come no hurt or detriment to so many quarts of the vegetable spirit. I have seen some supercilious men that would not add ferment to the matter of their spirit, but sugar or honey, by which they would promote fermentation, and so have thought to get a pure spirit, not considering that honey and sugar, after fermentation are made to yield their spirit also, whereof one spoonful yields more than ten or twenty of Barm: But hony and sugar fermenting not without difficulty themselves, how can they promote the fermentation of other things? Who also have had experience, that the addition of their ferment hath been superfluous, whilst their flowers and hearbs have stood some weeks in maceration, before they begun to ferment, and that often times they have contracted an acidity, mustiness and stink, the reason of which was an unsutable ferment. There are indeed the fruits of some trees that have a sweet and full juice, as grapes, cherries, apples, pears, figs, &*c.* which need not the addition of any ferment, having a natural ferment of their own, but other vegetables not so,

being lean, as hearbs, flowers and roots. It is necessary there to promote the fermentation of them by the addition of a sutable ferment, lest in length of time these hearbs and seeds lose their spirit exhaling in maceration. And thus much I was willing to say for information sake, and indeed for the sake of them who seek after the best and choicest medicines, wanting a good burning spirit as a companion applicable to them. For this spirit came not only by it self, as *Aqua vitæ*, into a medicinal use as well internal as external, especially that which is prepared of cordial, and cephalick hearbs; but also being united with the proper oyls of those hearbs in many desperate diseases, where it could put forth its vertues eminently.

And thus much sufficeth concerning the preparation of vegetables that goes before the distillation of burning spirits.

The manner of distilling in general followeth.

He that is going to distil, hath need to stir his fermented matter very well with a stick, that the thicker parts may be well mixed with the thinner, and then he must fill therewith his distilling vessel set upon a treefoot, and joyned to the copper globe in the furnace on one side, and to the refrigeratory on the other, the joints in all places being well closed either with Oxe-bladders, or with starch and paper. Also the interiour part of the globe in the distilling vessel must be fenced with a copper or wooden basket, that the herbs, seeds, and other things enter not into the globe, into which only water must come. Also the upper hole must be close stopped with a fitting stopple wrapt about with linnen clouts, (*viz.* that hole by which the matter to be distilled is put

in) like to vessels of wine that are stopped. Which being well done, you must kindle the fire in the furnace under the globe, until all the matter in the whole vessel boyl well, and that burning spirit rise, and go out, through the refrigeratory (where it is condensed) into the glass receiver that is set under it, no less than that distilled out of a still; and you must continue the fire till all the spirit be come forth, which you may know by the taste. Which being done, and all things being cold, let the remainders be taken out by the lower large tap-hole, for meat for swine, or other uses. The spirit that is drawn off may be exalted, and rectified at your pleasure in the same vessel, being first made clean together with the refrigeratory. Note well, that sometimes there is left a fat oyl with the flegm in rectifying of the spirit, proceeding from that hearb of which that was the spirit, which did distil off with the spirit from the matter with a strong fire in the first distillation, but in the rectifying could not ascend with the spirit in a gentle fire, but is constrained to remain with the insipid flegm. And this oyl also hath its vertues, especially that which is rectified by a glass gourd in Balneo, with the spirit of salt, and clarified. Now the like oyl is got almost from all hearbs, roots, seeds, flowers, and fruits, but out of one subject more than another, according to the hot and cold temper thereof. Especially the sediment of wines yields a good quantity of such oyl, which being rectified is a medicinal true oyl of wine, but not before endued with a sweet savour, and it is an excellent cordial, although I know no body that knew this before.

And thus I have shewed the general way of distilling, burning spirits, by help of the aforesaid wooden distillatory. Now also follows,

The manner of distilling Spices, Seeds, Flowers, Hearbs, Roots, Woods, &c.

First, the seeds must be broken in a mill, flowers, hearbs, and roots cut small, the woods broken or rasped, upon which afterwards a good quantity of water (in which they may swim) must be poured for the maceration of them, so that when the distillation is ended there may remain some water, lest for want of water they be burnt in the distilling, and yield an oyl savouring of an *empyreuma*, and not sweet. Neither is too great a quantity to be poured upon them, but as much as shall serve to prevent the burning of the aforesaid vegetables in the distilling of the oyl thereof. And indeed fresh vegetables may presently without any foregoing maceration, being put with their proper waters into the distilling vessel be distilled. But they that be dry may for the space of some dayes be macerated before they be distilled. Also the water appointed for maceration must be salted, for the better mollifing, and opening the aforesaid materials, that they may sooner yield their oyl. Now green and fresh need not any salt water, yet it will not be hurtful to mix some therewith, because salt helps the boyling water, so as to make the oyl more easily to ascend. It also helps and furthers distillation as doth Tartar and Allome, if they be rightly mixed and ordered. Which being all rightly done, the materials that are macerated must be put by a funnel into the distilling vessel, and fire must be given as hath been spoken concerning the burning spirit, and the oyl of the seed, or wood macerated in the water will come forth in the distillation together with the water. And although by this way more oyl comes forth, *viz.* Maceration being made by the addition of salt, than without salt, by the help of the sweet water alone, as is the fashion in all places

almost to distill oyls of spices; yet much remaines inseparable by the water, and consequently not to be sublimed with the water. Therefore the better way is that which I shewed in the first part to be performed with the spirit of salt, which if you please you may follow. All the oyl being come forth (which is perceived by the changing of the receivers) the fire is to be extinguished, and the remainder is to be taken out, which if it be of seeds, hearbs, or fruits, may, being yet warm, be fermented by the addition of ferment for the distilling of the spirit, of which there cannot be so great a quantity by reason of taking away of the oyl, as otherwise is drawn out of things that have not lost their oyl: For all burning spirit partakes of much oyl, of the essence, and nature whereof more a little after. Now spirits must be made without the addition of any salt, for salt hinders the fermentation, without which the burning spirit cannot be had. But the water that is distilled together with the oyl, is to be set in a certain temperate place, until the oyl ascend, and swim upon the water, from whence it is to be separated with a Tunnel (of which in the fifth part,) also there are some oyls which do not ascend, but fall to the bottom, which are also to be separated with a Tunnel, and kept for their uses. Now how these oyls may be kept clear long, and not contract any clamminess, shall be taught in the fifth part: but how they may after they have lost their clearness by long standing, and are become tenacious, be restored and clarified again, is taught in the first part, wherefore I need not here repeat it.

How Oyls are to be coagulated into Balsames.

It hath been the custom a long time to turn aromatical oyls into Balsams, where always one hath been willing to excel another in this Art, which

nevertheless was nothing hitherto, but for a washing and cleansing; for they could not be used inwardly, but only outwardly for their odour to comfort the heart and brain. Now the aforesaid oyls are coagulated many ways, and are made portable in Tin, Silver, and ivory boxes.

Some have mixed the fat of a lamb with them by help of heat, and have turned them into a liniment, which they have coloured with divers colours; as for example, they have corrupted the oyls of green hearbs; as rosemary, marjoram, lavender, rue, sage, with a green colour, by the admixtion of verdigrease (which is noxious to the head and heart) where one corroborates and refresheth, another destroys. They have tinged the Balsam of Cinnamon, and *lignum Rhodium* with a red colour by the help of a poysonous Cinnabar. Others that are more industrious, have tinged their Oyls with extracted colours of vegetables, which balsams are more safely taken inward: But they are not durable, acquiring a sliminess and stink; wherefore they have mixed white wax to coagulate them: By which means they are become more durable without stinking; but yet in length of time so tenacious, that being smeared or rubbed upon the skin, they stick fast by reason of the wax that is mixed with them: at last others have found out a better way of coagulating aromatical oyls, and other things, *viz.* by the addition of the oyl of Nutmeg made by expression, having lost its odour and colour by spirit of wine; which they called the *Mother of Balsames*. And this way hath been a long time concealed by Apothecaries as a great secret, until at length it is become common, so that balsames prepared after this manner are sold almost in all shops: But although that be the best way, yet they are not durable balsames that are made that

way, because they lack salt. I do not contemn and disapprove of Balsames made after this way, for if a better way had been known, better had been made, for no man is obliged beyond his power. Wherefore they are not only to be excused, that have used Lambs fat, Wax, and the oyl of Nutmegs in the making of their Balsames, but also to be honoured for their communication. Now seeing the aforesaid Balsames cannot be taken inwardly, nor be so well outwardly administred by reason of their unctuosity, others have consulted to congeal the Oyls by the admixtion of their own proper fix-salts: And Balsames prepared after this manner are made free from clamminess, or tenaciousness, and may be dissolved in wine, beer, or any liquor.

Wherefore they may be not only conveniently taken inward, but also more fitly than those old, be rubed outwardly for the odours sake, because they are easily washed off again with water. They do not only give a most sweet odour being rubbed, but also by reason of the admixtion of the fixed salt, having the nature of salt of Tartar, do beautify the skin. Wherefore they are to be commended, being dissolved in fair warm water for a lotion for the head, and face; not only because they beautify, but corroborate with their excellent odour; which those fat Balsames cannot do. Wherefore this way is to be preferred far before the other.

Let him therefore that will, receive what I have said, for *rare and new things are not alwayes accepted*, especially *being obscure*: but I hope for the approbation of the age to come.

The manner of preparing follows.

Take the remains of the burning spirit, and being put

into a sack, press it hard: reduce the water pressed out into vinegar, and of roses thou shalt have a rose vinegar, and of other things another, being the best in a Family for to season meats: then take the remains out of the sack, and reduce it to white ashes in a potters furnace, upon which pour the flegm of its own burning spirit (being separated) to extract the salt, from which evaporate again all the humidity in a glazed earthen pot: calcine the coagulated salt gently in a clean crucible, and it will be white and be like to salt of tartar in tast; from which abstract, sometimes its own proper burning spirit, calcining the salt first every time; and the spirit will be so exalted by its proper salt, that it will presently assume its proper oyl, and will, being poured upon it, associate it to it self so as to be perceived no more in the spirit, which will remain very clear: Which being done, calcine the salt yet once more very well in a crucible, and dissolve so much of it in its proper flegm, as sufficeth for the coagulation of the oyl, then mix this solution with the burning spirit, mixed with its oyl, and set it in a vial of a long neck well stopt, in Balneo, that the spirit may not exhale, in the coction of it, and in the space of a few hours there will be an union of the mixture which will be as white as milk. Which being done, let the glass cool, for there is a conjunction of the spirit, oyl, and salt, so that neither can be discerned from another, which is to be poured into a vessel of a wide mouth, and it will be congealed in the cold like a white ointment, not only to be anointed withal, but also to be dissolved in any liquor, being of an excellent odour, which may also be given inwardly very conveniently, and being used outwardly it makes the skin beautiful and sweet; wherefore this is that most desired balsame of Princes and Ladies. And by this way the

three principles of vegetables, being separated, and purified, are again reunited, in which union there is found the whole vertue, tast, and odour of the vegetable.

Note well, That he that will colour balsames, must draw the colour out of vegetables with spirit of wine, which he must make to be coagulated together with it. After this aforesaid manner, therefore you may draw out of any vegetable that hath in it salt, spirit and oyl, soluble and well smelling balsomes without the addition of any other strange thing, which are not to be contemned.

And because here also is taught that most odoriferous balsame of roses, for roses yield but a little oyl, without which that cannot be done, know that not only roses or rose leaves also are to be taken for the making the aforesaid balsome, but also together with the leaves those whole knots; for that yellow that is in them yields that oyl, not the rose leaves, *&c.* And let what hath been said suffice concerning our preparation of balsames, which if they be rightly made, are not I suppose, to be contemned, neither do I reject those that are made without salt: Let him that hath better communicate them, and not carp at ours. And so I would that all and each process should be comprehended under some one general, *viz.* of distilling burning spirits, and oyls, by the help of a wooden distilling vessel, and their conjunction by the help of their proper fixed salt, I could here add more things concerning the use, and vertues of spirits of wine, and of those most sweet vegetable oyls; but because they are clearly enough spoken of by others, I account it a superfluous thing to repeat the sayings of others, being contented with the description of one only

general process, which you may imitate in other particulars.

There follows now the use of the second wooden vessel, which is to be used instead of those of copper or lead, serving for distillations, digestions, extractions, and fixations.

The vessel being made ready according to the prescription set down before, there is nothing else to do, than to fit the furnace with the globe, and at your pleasure to heat water in it, with a government of the fire in the furnace. Now all things may here be done, which otherwise are done in a common *Balneo*; where there is no other difference but of vessels; here is used a wooden vessel, there a copper, leaden, or iron, *&c.* In this operation also is used the same furnace with the same globe, which was used above in the distillation, wherefore you need add nothing else beside, for nothing is more common than a *Balneum* in distillation; let the demonstration therefore of the use of the copper globe suffice. Now I thought it worth while to set down some Chymical medicinal extracts, not common, which may be made by the help of this *Balneum*, which being rightly prepared do many things in many diseases.

And first of a vomitive Extract.

Take an ounce of the flowers of Antimony, of purifyed Tartar ʒ ij. of sugar-candy ʒ vj. of rain water two pints, being mixed together, set them in a strong vial in *Balneo* for to be cocted, and make them to boyl strongly the space of ten or twelve hours. Then the *Balneum* being cold, take out the glass, and pour forth the decoction, and filter it through a brown paper put into a tunnel; the filtred water will be

reddish betwixt sweet and sowre, which take (the fæces in the filtre being cast away) and in a small gourd glass draw off all the moisture with a gentle fire in *Balneo* unto the consistency of honey of a brownish colour, upon which again pour a pint of spirit of wine, poured forth into a vial with a long neck; and set it on *Balneo* with a moderate heat the space of eight or sixteen hours, and then the spirit of wine will separate, and extract the essence, which will be more pure and noble, the fæces being left in the bottom; which after all things are cold are to be separated by the Help of Filtration through a double brown paper. Then take the red tincture that is filtred, and in a gourd glass in a gentle Balneo draw off almost all the spirit of wine until there remain a matter like a very sweet syrup, which being taken out keep as a most excellent vomitive, most profitable in many diseases, where other Catharticks can do nothing. For this medicine works most gently, wherefore it may be given to children of a year and half old without danger, and also to old men. This medicine purgeth and attracts all humors from the nerves, and veins, opens all obstructions of the liver, spleen, lungs, and kidneys, by which means many most grievous diseases are cured.

I never found a vomitive comparable to this, which works quickly and safely. The dose of it is from grain 1, 2, 3, 4. to 10. and 30. according to the age and sickness. It may be taken by it self, or in wine, beer, &*c.* and it will within a quarter of an hour begin to work, and ceaseth within two hours. Sometimes it doth not provoke vomit at all, but only stools, where a glyster is very helpful if it be given a little before the administring of the aforsaid medicine, being made of two or three spoonful of oyl Olive, and salt water; for the glyster prepares the way below, so that

it seldome then works by way of vomit: when also the patient may presently after the taking of the medicine hold hot tosted bread to his mouth and nose, which hinders vomiting and promotes the operation by stool. But in my judgment it is better not to hinder the medicine seeking a spontaneous way of operation, and not forced: For vomiting is more convenient for some, than purging by stool. Now these things I have spoken for the sake of those, who although they abhor vomiting, yet desire to be purged by the essence of Antimony, which is of all that I know the most safe, and sweet Cathartick. For it searcheth the whole body far better than all others, and frees it from many occult diseases, the which all other vegetable Catharticks could not do. It hath also this commodity in it, that although by littleness of the dose, or the strong nature of the patient it doth not work by vomit or stool, yet it doth not like other medicines hurt the body, but works either by sweat or urine, so that Antimony being rightly prepared is seldome administred without profit. When as on the contrary, vegetable Catharticks being given in less dose or by reason of some other causes do not work, although they do not make the body swell, and produce manifest diseases, yet they threaten to the body occult sicknesses.

Now the *Arcanum* of Antimony doth not onely not do hurt, if it do not sensibly operate, but by insensible working doth much good to the body of man. Wherefore there is a great difference betwixt purging minerals, and vegetables. For minerals are given in a less dose without nauseousness, but vegetables with a great deal of nauseousness, and sometimes with danger to the sick in a greater dose. Now that nauseousness also proceeding oftentimes from the great dose of the ungrateful bitter potions

does more hurt than the potion it self. I wish that such kind of gross medicines were abolished, and the sweet Extracts of Vegetables and Essences of Minerals were substituted in their place.

A purging Extract.

Take of the roots of black Hellebore gatherd in fit time, and dryed in the air, one pound, the roots of Mechoacan, Jallap, of each four ounces; Cinnamon, Annisseed, and Fennelseed, of each one ounce; of English Saffron a dram, powder all these Ingredients, then pour upon them the best rectified spirit of Wine, in a high glass gourd, and upon this put a blind Alembick, and set it in digestion; in Balneo until the Spirit of wine be tinged red, which then decant off: and pour on fresh, and set it again in digestion; until the spirit be red, then pour on fresh again, and do this so often until the spirit will no more be tinged red, which commonly is done at three Times. Mix these tinged spirits, filter them, and in Balneo by a glass Alembick, with a gentle heat draw them off from the Tincture, and a thick juice will remain at the bottom of a brownish colour, which you must take out whilst it is yet hot, and keep it in a clean glass for its uses. The Spirit of Wine drawn off from the extract may be reserved for the same use. Now this extract is given from grains 3, 6, 9, 12. to 31. according to the age, and strength, being mixed with Sugar, it hath not an ungrateful tast, and it works gently, and safely, if it be not given in too great a dose. And if thou wilt have it in the form of a Pill, mix with it being yet hot, an ounce of clear Aloes, and half an ounce of Diagridium powdered, being mixed bring it into a mass for Pills, and keep it for your use. The dose is from grain 1. to a scruple. It evacuates all superfluous humors, but it is not to be

compared with the medicine of Antimony. And this extract I put down for the sakes of those that fear Minerals, and abhor Vomits, which in my judgment is the best of all vegetable Catharticks.

A Diaphoretical Extract.

Take the wood Sassafras, Sarssaparilla, of each six ounces; Ginger, Galengal, Zedoary, of each three ounces; long Pepper, Cardamoms, Cubebs, of each an ounce; Cinnamon, Mace, of each half an ounce; English Saffron, Nutmeg, Cloves, of each a dram: Let the woods be rasped, the roots and spices poudered, pour upon them, being mixed, the spirit of wine, and let the tincture be drawn forth in Balneo, as hath been abovesaid of the purging Extract, evaporate away the spirit to the consistency of honey, which keep for your use. It is good in the Plague, Feavers, Scorbute, Leprosie, Frenchpox, and other diseases proceeding, from the impurity of the blood, curing them by sweat. The Dose of this Extract is from a scruple to a dram with proper vehicles: it provoketh sweat presently, driveth away all venenosities from the heart, and mundifies the blood.

And although it be a most effectual vegetable Diaphoretick yet it may not be compared to those subtile spirits of minerals, of which in the second part. Also animal diaphoreticks have their commendations, as the flesh of vipers, the fixed salt of spiders and toads, in their peculiar operations, where each alone without the mixture of any other thing puts forth and sheweth its operations; neither are animal and vegetable diaphoreticks to be compared to the mineral, as *Bezoarticum minerale*, *Antimomum diaphoreticum*, and *Aurum diaphoreticum*.

A Diuretical Extract.

Take the seeds of Saxifrage, Carraway, Fennel, Parsly, Netles, of each 3. ounces, the root of liquorish, the greater burr, of each an ounce, the powder of woodlice half an ounce. Let these being mixed and powdered be extracted with spirit of Juniper according to art: then mix these following things with the extracted matter: Take the salt of Ambar, Soot, Netles, of each half a dram, purified Nitre a dram: Let these be powdered, and mixed with the extract and this mixture be kept for use. The dose is from a scruple to a dram, in the water of parsly fennel, *&c.* This extract forceth urin, opens the ureters, purgeth the reines, and bladder from all viscous flegme (the mother of all tartareous coagulation) *viz.* if it be used timely: In this case is commended also the solution of flints, and crystals, made with spirit of salt. A greater commendation have salts of nephritick hearbs made by expression, and crystallisation, without calcination, the preparation whereof shall not here, but elsewhere be taught.

A somniferous Extract.

Take of *Thebaic opium* four ounces, of Spirit of Salt two ounces, purified Tartar one ounce, set them being mixed in maceration in Balneo in a glass vessel for a day and night, and the spirit of salt with Tartar will open the body of the *opium*, and prepare it for extraction, upon which pour half a pint of the best spirit of wine, set it in a gentle Balneo to be extracted. Decant off the spirit that is tinged, and pour on fresh, set it in digestion till the spirit be coloured. Then mix the axtractions together, and put to them in a glass gourd two drams of the best

Saffron, of oyl of Cloves a dram, and draw off the spirit of wine in Balneo, and there will remain a thick black juice, which is to be taken out, and kept in a clean glass vessel. The dose thereof is from one grain, to five or six, for those of a mans age, but to children the sixth or eighth part of a grain. It may be used in all hot distempers without danger. It provoketh quiet sleep, mitigates pains as well outward as inward, it causeth sweat; but especially it is a sure remedy for the epilepsie in children that are new-born; for as soon as it is given to them to the quantity of the eighth part of a grain in wine, or womans milk, there presently follows rest, and sweat with sleep, by which means the malignity is expelled, the children are refreshed, and desire victuals, and the fit returns no more afterwards. Although haply the like symptomes may be perceived again, yet if the aforesaid dose be administred again, the children are refreshed, and cured wholly, whereas otherwise they would have dyed, *&c.* whereof I have not restored few with this medicine. Moreover also there are very effectual anodine medicines, as those volatile spirits of vitriol, allome, Antimony, and other minerals, with which, as also with that narcotick sulphur precipitated from the volatile spirit of vitriol, nothing may be compared.

A Cordial Extract.

Take red roses four ounces, of the lilly of the valley two ounces, the flowers of borage, rosemary, sage, of each an ounce; cinnamon, lignum aloes, of each two drams; cloves, mace, nutmeg, galangal, cardamoms the lesser, of each half an ounce; the shavings of ivory, hartshorn, of each an ounce; of *English* saffron a dram, of *nux vomica* a dram: Mix them and reduce them to a fine powder, and let the tincture be

extracted with spirit of wine in Balneo, which is to be drawn off again, unto a just consistence. Let the extract be kept for use. It may be used in almost all faintings, and other affects that are not joyned with a preternatural heat. The dose thereof is from grains 3, 6, 9. to a scruple with proper vehicles; being often administred it refresheth the spirit, corroborates the brain, and other parts of the body. It is made more efficacious by the adding of the essences of minerals, especially of gold, of which thing see the first part concerning the sweet oyl of gold.

Of an odoriferous Extract.

I need not teach the making of any odoriferous vegetable extract, because the manner of drawing forth, or distilling oyls of vegetables that have sweet odores, hath been shewed a little before, as of hearbs, flowers, and seeds, which are the most noble, and sweet essences of vegetables, by the odour whereof the heart and brain are corroborated, which being reduced into balsams are made transportable. Better extracts therefore, and more excellent cannot in my judgment be made out of vegetables, then those aforesaid oyls, unless any one would mix aromatical extracts made with spirit of wine with metallick solutions, and being mixed digest them, then there will a certain most odoriferous oyl go from the extract not only more efficacious, but more excellent than that common distilled oyl by reason of the admixtion of the spiritual metallick vertue, especially of gold and silver, dissolved in the acid *Menstruum* communicating its vertues to the Aromatical oyl. Moreover any vegetable oyl may be exalted in vertues and odour by the help of spirit of urine, or salt Armoniack, by the help whereof not only odoriferous oyls are exalted, but also the

inodorous oyls of vegetables are made odoriferous, if they be a while digested in spirit of urine: and not this only but every mineral, and metallick sulphur, although the odour thereof be bound up with most strong bonds, is opened by the benefit thereof, and is reduced by digestion in a very little time into a most sweet and odoriferous essence. Lixivial spirits exalt the odours, and colours of sulphurs; acid purge sulphurs, but change their colours and odours. Musk and Civet get the sweetness; and excellency of their odour from the subtile urinous spirit of a certain Cat, digesting some certain fat and converting it into such a kind of most odoriferous matter.

And let this that hath been said suffice concerning Extracts, which might have been omitted, because many of these kind of Extracts are found in the writings of other authors in many languages: but I was willing to set down these, lest this book might seem to contain in it nothing else besides the new way of distilling, being furnished also with good medicines.

Of Baths.

A little before hath been given a description of a Tub for a Bath in which any one may sit with his whole body except his head, not only to be washed in sweet warm water, whether medicinal and mineral, but also to sweat in without water, where the vessel is heated by warm vapours, either of sweet waters, or minerals. And every one may provide such Baths for himself according to his necessity at home, whereby the same diseases are cured as those that are cured by the help of natural Baths, so that he need not for the baths sake go a great journey, but may stay at home with his family and follow his Calling without

trouble, when he hath occasion and need to used them.

And whereas it cannot be denyed, that by the use of the Baths most grievous diseases which cannot be cured by Physitians, are happily cured; I was willing for the sake of my neighbour to publish this instrument together with the preparation of mineral waters; which publishing will not without doubt be without profit, and advantage. Wherefore I will in brief shew you the preparation of mineral, and sweet waters, and their use, and first,

Of a Bath of sweet or common water.

There is no art to make a Bath of sweet water, for you have nothing else to do, then to fill your vessel with river or rain water, and to make a fire, which by the help of the copper globe will heat the water, which being sufficiently heated, you may sit in it, and cover the Tub, that the hot vapors evaporate not, nor the cold air enter in, and cool the exteriour parts of the body: Wherefore also you must apply a clean linnen cloth about your neck, lest the warm vapors evaporate there: which being rightly observed, you may sit the space of 1. 2. 3. hours, or as long as you please or your sickness require. You must keep a continual heat as much as is necessary, which may be done by the help of that globe. If you be thirsty in the mean time you may drink some proper distilled drink according to the nature of your disease, of which thing nothing now, because I am resolved to write a peculiar *book de Balneis*, and here only to shew the use of that copper globe in heating of Baths. And although there be not a perfect instruction of all, yet of some Baths, and their uses there shall a short instruction be given in this place.

Of the nature, and property of natural Baths.

Know that the greatest part of medicinal waters in *Germany*, and other countries as well hot as cold carry with them from the earth a certain sulphureous acidity more or less: in which acidity consists that medicinal faculty and vertue of this or that water. And if those waters lose their odour and tast by the exhaling of their subtile spirits, then also they loose their vertues; although also there be found some waters, which have not only a spiritual sulphur, but also are impregnated with a certain mineral, or metallick body mixed with Allome, or Vitriol, which comes not elsewhere then from the common water running through the mines. There are found also other baths, the power and vertue whereof consists not in any spiritual sulphur, nor in any metallick body mixed with salt, but only in a certain spiritual salt mixed with a certain subtil fixed earth, which waters do not run through metallick mines as others do, but rather stones of the mountaines calcined with a subterraneal fire, whence also they borrow their subtil acidity with their insipid earth. And this no man will deny that hath the knowledge of volatile and fixed salts of minerals, and metals: the which I am able to demonstrate with very many, and most evident reasons, if time and occasion would permit; but it shall be done sometime or other as hath been said in a peculiar treatise. Now therefore I will only teach how by salts, minerals, and metals, artificial Baths may be made, which are not only not inferiour to the natural in vertue, but also oftentimes far better, and that without much cost or labour, which any one may use at home in stead of the natural for the expelling of diseases, and recovering of health. And although I am resolved to set forth a book that shall treat largely of the nature, and original of

Baths, and of their use; yet I am willing now also to say something in brief concerning it, and that from the foundation, seeing that there are so many different opinions of learned men, and those for the most part uncertain.

As concerning therefore the original of the acidity as well volatile, as corporeal, as also the heat of Baths, know that is not one, and the same; for else each would have the same properties, but daily experience testifies the contrary: For it is manifest that some Baths help some diseases, and others are hurtful for them, which comes from nothing else but from the difference of the properties of the mineral waters proceeding from a diversity of mines impregnating those waters. In a word, sweet waters attract their powers, and vertues in the caverns of mountains from some metal and minerals of divers kinds, that have naturally a most acid spirit of salt, as are divers kinde of marcasites containing copper and iron, and sometimes gold and silver; also kinds of vitriol and Allome called by the ancients *Misii*, *Rarii*, *Chalcitis*, *Melanteria*, and *Pyritis*, whereof some are found white like metals, but others dispersed in a fat earth, of a round figure in greater or lesser pieces: which sulphureous salt mines whilest the water run through, and humectates, that spirit of salt is stirred up, having got a *vehiculum*, and falls upon the mines by dissolving them, in which solution the water waxeth warm, as if it had been poured on quick lime, or like spirit of vitriol, or salt mixed with water, and poured on iron, and other metals; where continually and daily that water running through the mines whose nature and properties it imitates, carrys something with it: wherefore there are so many, and such various kinds of Baths as are the mines by which the water is heated. Let him that will not

believe take any mineral of the aforesaid quality, and wrap it up in a wet linen cloth for a little while, and he will see it experimentally that the mineral stone will be heated by the water, and so heated, as if it were in the fire, so as thou canst scarce hold it in thy hand, which at length also by a longer action will cleave in sunder and be consumed like quick lime.

I will publish some time or other (God willing) more fully, and clearly in a peculiar treatise this my opinion, which I have now delivered in very few words. Although to the sick it be all one, and it matters not them, from what cause the baths come, and whence they borrow their vertues, if so be they may use them; this controversie being left to natural Philosophers that will controvert it, which none of them can better decide than a skilful Chymist, that hath the knowledg of minerals, metals, and salts.

And first of sulphureous Baths that have a subtil acidity.

In the second Treatise I have demonstrated the manner of distilling subtil, volatile, sulphureous spirits, *viz.* of common salt, vitriol, allome, nitre, sulphur, antimony, and other salts of minerals, and metals, and their vertues, and intrinsecal properties, now also I will shew their extrinsecal use, as they are to be mixed with waters for Baths. The vertues therefore of Baths proceed not from insipid water, but from those most subtile, volatile, sulphureous, and salt spirits; but these being of themselves not mixed with water unfit for Baths, to be used for recovering of health, by reason of their too great heat, and subtilty; the most high God hath revealed to us unworthy and ungrateful men his fatherly providence shewing to us by nature the use of them, and the manner of using of them for the taking away

of diseases; which (nature) being never idle, works uncessantly, and like a handmaid executes the will of God, by shewing to us the various kinds of distillations, transmutations, and generations. From which teacher we must learn all arts and sciences, seeking a certain, and infallible information, as it were out of a book writ with a divine hand, and filled with innumerable wonders, and secrets. And this is a far certainer knowledg then that empty, and imaginary Philosophy of those vulgar disputing Philosophers. Dost thou think that that true Philosophy can be sold for a hundred Royals? How can any one judge of things hid in the earth, who is willfully blind in things exposed to the light of the Sun, hating knowledge? I wish knowledge were sutable to the name: how can any one that is ignorant of the nature of fire, know how to work by fire? fire discovers many things, in which you may as in a glass see things that are hid; The fire shews to us how every thing, waters, salt, minerals, and metals, together with other innumerable things are generated in the bowels of the earth by the reflexion of that central, and astral fire: for without the knowledge of fire all nature remains vailed, and occult. Fire (always had in great esteem by Philosophers) is the key for the unlocking of the greatest secrets, and to speak in a word, he that is ignorant of fire is ignorant of nature with her fruits, and he hath nothing, but what he hath read, or heard, which oftentimes is false, according to that; *He easily speaks untruths that speaks what he hath heard.*

He that is ignorant knows not how to discern betwixt the truth and falshood, but takes the one for the other. I pray thee, thou that art so credulous, dost thou think that thy teacher writ his books from

experience, or from reading other Authors? May they not be corrupted and sophisticated by antiquity, and frequent description? Also dost thou understand the true, and genuine sense of them? It is better to know, than to think; for many are seduced by opinions, and many are deceived by faith that is without knowledge.

And thus much for youths sake I was willing to say, that they would not spend their tender years in vanities, but rather would make tryal in the fire, without which no man obtains a true knowledge of natural things; which although it seem hard in the beginning, yet it is pleasant in old age.

Now follows the mixture of those subtile mineral, sulphureous, and salt spirits with water.

As concerning the weight of the aforesaid spirits that are to be mixed with sweet water, giving it the nature, and property of natural baths, I would have thee know, that of those, which in the second part I shewed to be various, and divers, being, *viz.* not equal in vertue, the same weight cannot always be so accurately observed: seeing also there is a consideration to be had of their strength, and of the strength of the patient.

Now you may at the beginning mix one or two pound of the spirits with a sufficient quantity of the water, and then by sitting in it make tryal of the strength of the artificial Bath, which if it be too weak is to be increased by adding a greater quantity of the spirits, but if too strong, then it is to be diminished by abstraction; of which more at large in *Arte nostra Balneatoria*. Now this observe, that it is best to make Baths in the beginning weak, then stronger by little and little by degrees, as the nature of the sick is

accustomed to them, that it be not overcome by the unaccustomed use of them being too strong. Wherefore Baths are to be used with discretion, and cautiously, for which matter I refer the reader to my *Artem Balneatoriam*, in which he shall find plain, and perfect instruction; let it suffice therefore that I have shewed the use of the Copper Globe, in heating Baths, which let the sick take in good part, untill more come. Now follows the use.

Of Sulphur Baths.

Apply the furnace with the Copper Globe to the Tub after the manner aforesaid, and pour in a sufficient quantity of sweet water, which make hot with the fire kindled in the furnace by the help of the globe: which being sufficiently warmed make the patient sit in it, and pour into it so much of the sulphureous spirit as is sufficient; which being done cause that the tub be covered all over, that the volatile spirit vanish not, and as necessity requires, continue the heat till the patient come forth. Know also that the water is to be changed every time, and fresh spirits to be mixed. And this is the use of the Copper globe, in heating baths of sweet or medicinal water, and that either of vegetables, or mineral, and this made sulphureous by art or nature; whereby most grievous, and otherwise incurable diseases are happily cured: Of which enough now in this Treatise.

The use of the Copper Globe in dry Baths, which are more excellent than the moist in many cases.

I might have put off this matter unto its proper Treatise, where all things shall be handled more largely, and clearly: yet by reason of some unthought of impediments for a while procrastinating the

edition of the promised Treatise, I am resolved to say something of their use, after I have made mention of the humid, and indeed not only of the use of those subtile, sulphureous, and dry spirits, but also of the use of subtile, vegetable and animal spirits which are medicinal, because in some diseases dry baths are more commodiously used, than moist. He therefore that will provoke sweat by a dry bath without water, let him provide a wooden box, or wooden instrument convenient to sit in, standing upon a stool boared through that you may raise it up more or less according as you please, and having boards appointed for the armes and feet to rest upon. This box also besides the great dore must have also a little dore serving for the putting in of a burning lamp with spirit of wine, or of any earthen vessel with coals for to heat it. [*See the sixth figure.*] The box being well warmed, let the patient go in, and sit upon a stool, let the box be very close shut all about, and the furnace with the Copper Globe be fitted thereunto, under which let there be a small fire kindled, by help whereof the volatile spirit growing warm, goeth forth into the box like a most subtile vapour, penetrating all about the patient. But when this spirit is not sufficient to heat the box, set in it a burning lamp with spirit of wine, or some earthen pot with coals (the best whereof are made of Juniper or the vine, especially of the roots as being such that will endure long, and cannot easily be extinguished by the vapours of those spirits) that the patient take not cold, and the vapours of the spirits may the better penetrate the body of the patient. Let the wick for the spirit of wine in the burning lamp be incombustible made of the subtle threads of gold, of which thing more in *Arte Balneatoria*. In the mean time that volatile spirit penetrates, and heats the

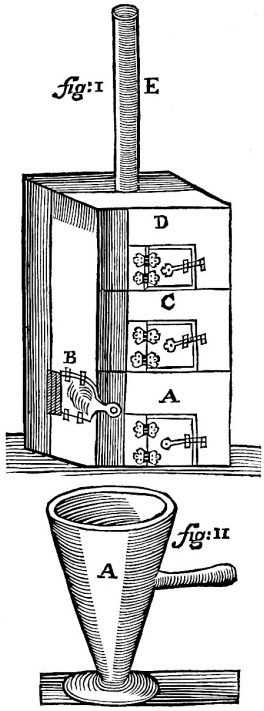
whole body, and performs its office, being this way used better than by being mixed with water. When the patient hath sate there long enough let him come forth, and go into a warm bed to sweat. Now before he go into the box let him take a dose of that volatile spirit, inwardly which is used outwardly to provoke sweat, and accelerate the action. And by this means not only those volatile sulphureous spirits of salts, minerals and metals, are used outwardly without water to procure sweat, but also the spirits of many vegetables, as of mustard seed, garden cresses, crude tartar, also of animals, as harts-horn, urin, salt Armoniack, *&c.* for the expelling of most grievous, and desperate diseases. Now the aforesaid spirits have divers properties, the volatile spirits of salt, minerals, and metals have some, those of vegetables and animals have others; those have a sulphureous and fiery essence; these a mercurial, and aerial; wherefore they serve for different uses. In some diseases those sulphureous are preferred; but in others vegetable and animal, where also a consideration is to be had of the sickness, and bath it self, that one be not used for the other, to the great dammage of the sick. For almost all natural baths, and volatile spirits of salts, minerals, and metals, partake of some most subtle, penetrating, heating, and drying sulphureous salt spirit; but the spirits of vegetables, and animals partake of a certain volatility that is most subtle, penetrating, heating, opening, cutting and attenuating, both urinous and nitrous, *viz.* contrary to the former; as appears by the pouring on of any volatile sulphureous spirit, as of common salt, vitriol, allome, minerals, and metals, upon the rectified spirit of Urin, or salt Armoniack: where presently the one mortifies the other, and takes away its volatility, and subtilty: so that of both

subtle spirits of divers natures there cometh a certain salt of no odour and efficacy. Whence it is manifest that all spirits partaking of divers natures, and essences have not the same faculties. Therefore be thou cautious in giving most potent spirits, lest thou give an enemy instead of a friend, and learn their natures, vertues, and essences, before thou usest them in medicine. But thou dost ask, whether is that great force of those spirits gone as it were in a moment? Did it evaporate in that duel? No I say, but transmuted into a corporeal substance, for of a most pure, mineral, subtle, and most volatile sulphur, and a most penetrating animal *Mercury* is made a certain corporeal salt, which is wonderful, and deserves to be called *Aquila Philosophorum*, because it is easily sublimed with a gentle heat, in which many things lye: for it doth not only conduce to the solution of metals, especially of gold, but also of it self by the power of maturation doth become a most efficacious medicine: Of which no more at this time, because I will only advise the reader, that he be diligent in searching out the nature of spirits, which although they change their bodies, yet are not therefore to be called dead, but rather reduced to a better perfection. And let this suffice concerning the dry use of baths in provoking sweat for the expelling of diseases: now for what diseases this or that spirit serves, thou shalt find in its proper Treatise, of which there hath been mention above, but in a word, know that those volatile sulphureous spirits of salts, minerals, and metals, are good in all obstructions of the inward parts, *viz.* of the spleen, lungs, and liver, but especially are most excellent in heating the cold nerves, because they do most efficaciously heat, attennuate, cut, expel, and mundify, wherefore they are good in Contractures, Palsies, Epilepsy, Scurvy,

Hypochondriacal Melancholy, Morbus Gallicus, Itch, and other corrosive ulcers, and Fistulaes, *&c.*

But the spirits of another kind, as of Tartar, Hartshorn, salt Armoniack, Urine, *&c.* are hot also, but not so dry, and besides the heating vertue, have also a penetrating, cutting, mollifying, attenuating, absterging, and expelling power; wherefore also they work wonderfully in all obstructions of the inward and outward parts: for they do better than all others, open the pores of the skin, and provoke sweat, mollify, and open the hemorrhoides; provoke the *menses* of young and elder women, purge and heat the womb, and therefore cause fruitfulness; they heat and purge a cold and moist brain, acuate the intellect, and memory, let they that be great with child take heed of them, and also they that have a Porous open skin. Such and other more properties, and that deservedly are ascribed to these spirits. Now those two aforesaid baths (in one whereof those spirits are used in a humid way, being mixed with warm water, for the whole body to be bathed, and sweat in, but in the other in a dry way where the vapours are by force of the fire made under the Globe, forced up into the sweating box towards the patient, which being used after this manner do oftentimes penetrate, and operate more efficaciously than that humid way) are not to be slighted for the recovery of health, as doing things incredible. Now those spirits not being found in shops, nor being made by any according to the manner that I have shewed in the second Part, I would have thee know that there is yet another matter, which needs not to be distilled, and it is mineral; which being put into the Copper Instrument, doth of its own accord without fire yield such a sulphureous spirit, which penetrates very much, and goeth into the sweating

box, like in all things to that which is made out of salts, minerals, and metals. Nature also hath provided us another matter that is to be found every where, which being in like manner put into the Instrument doth by it self, and of its own accord without fire yield a spirit, in vertue not unlike to that which is made out of crude Tartar, or salt Amoniack, Soot, Urine, *&c.* Of which in the second Part, doing, *viz.* the same things with that which is made with costs and labours. Those foresaid two matters therefore can do the same things, which are required for a bath and sweating, which those two foresaid kinds of spirits, *viz.* mineral and sulphureous, vegetable and animal can do, *&c.* Now what those two matters which are easily every where to be found are, thou desirest to know; but I dare not if I would, for the sake of the pious to reveal them because of the ungrateful, and unworthy. For it is an offence to cast pearl before swine, which yet the pious may, by the blessing of God find out by the reading of the rest of my Writings.



Now follows a wooden vessel which is to be used instead of a Cauldron in boyling of Beer, Metheglin, Vinegar, &c.

Many things might be said concerning this matter, for although men may be found in any part of the world, who know how to make malt of corn, and of this beer and vinegar; yet many things may be said of this matter for the correcting of it; but because it is not my purpose to shew such things now, yet I shall say something of the use of the copper globe which any one may provide instead of Caldrons, and which is to be used with a certain wooden vessel in the boyling of Beer, which by this way he may, as hath been spoken above concerning the operations, make as well as by the help of Caldrons. Moreover I could

here also teach some other most profitable secrets, *viz.* [*See Consolat. of Seamen*] how honey may be freed from its ungrateful odour, and tast by the help of precipitation; and how afterwards a most sweet spirit is to be drawn out of it very like in all things to the spirit of wine: also how the best and sweetest wine clear, and durable like to Mallago, may be made thence: also how after purging it is to be crystallised, so as to resemble Sugar-candy in goodness and tast: also how the sweetness thereof may be converted into Tartar, very like to the natural: [*See Explicat. Mirac. Mundi.*] Also how out of fruits of trees, as cherries, apples, pears, *&c.* a very good, and durable wine in goodness, colour, tast, and vertue, like to the natural, may be made; also how out of unripe grapes, that are not maturated either by the inclemency of the country, or air, their acidity being changed into sweetness, very good Wines like to the Rhenish may be made: also how out of sorrel, and other vegetables, a very good Tartar may be made, and that in a great quantity without much costs, resembling the Rhenish in colour, tast, and other vertues: Also how out of Corn, (whether malted, or ground in a Mill) a very good spirit is to be made, and also a very good vinegar like to the Rhenish; also how out of Corn, (ground in a mill) or Meal, a very good spirit is to be distilled without any loss of the Meal, continuing yet fit to make bread. Such and more of this sort might be taught in this place, but because it is not good to divulge all things together, and at once, and this book would by this means grow bigger than I am willing it should, if such things should be here taught, I shall make an end of this Book (omitting other excellent possible secrets of nature) which although it be but little, yet will without doubt be profitable to many. And so

Reader farewel.

THE FOURTH PART OF Philosophical Furnaces:

In which is described the Nature of the Fourth Furnace; by the help whereof, Minerals and Metals are tryed, and examined after a more compendious way, than hitherto after the common manner; also the separation of Metals by the force of Fusion, and other necessary things that are done by the power of Fusion or Melting. Most profitable for Chymists, Tryers, and Diggers of Minerals.

Of making the Furnace.

In the first Figure, A. *represents the Ash-hole with its door*. B. *The Register appointed for governing the fire.* C. *The Hole with its door assign'd to receive the Crucibles and Coals.* D. *The Hole with the door of the First Story.* E. *The*

long Pipe of Iron in the top of the Furnace.

The second Figure, *A Cone or Casting Vessel belonging to this Furnace*.

This furnace may be made greater, or smaller, as you please, according to the matter to be tryed: and if the *Diameter* thereof within, be but of one foot, you may set in it a crucible containing two or three pound; but greater crucibles require a greater furnace. Now this furnace must be quadrangular, and be built of stones, and lute, such which abide the fire, of the height of one or two foot from the bottom to the grate, which must be such as may be cleared from the dross mixed with coals, or such as was the grate of the first furnace, consisting of too strong cross iron bars fastned in the furnace with certain distances for the receiving of 5, 6, or 7. other lesser iron bars which are to be moveable, so that when they are obstructed they may be removed, and cleared from the dross; the lower part of the furnace must have near the bottom a hole (in the forepart) of the heighth, and breadth of a little span, with an iron or copper door, shutting close: the lower part also must have another hole near the grate on the other side with its register for the government of the fire, and for the attracting of wind. Above the grate, and a hand breadth from the grate must be another hole for putting in of coals, and crucibles, sutable to the proportion of the furnace, and the height thereof must be of one foot, and the latitude of half a foot, if the inward Diameter of the furnace be of one foot, whereby the crucibles may be the more conveniently handled, and the coals be cast in with a fire-pan: Let this hole also have a very strong door of stone covered over with lute, either of which may endure the fire, and shut very close, that the fire may

thereby (when the crucible is placed in the fire) attract air, but only from the collateral hole under the grate. Let the height of the furnace (being coated above) from the hole appointed for the putting in of coals and crucibles, be of one great span: Let there also be a round hole in the furnace, having the third part of the intrinsecal diameter of the furnace, appointed for the flame and smoke; to which if you will use a very violent fire, put to it a strong iron pipe of the height of 5, 6, 8, or 12. foot, for by how much the higher you set your pipe, the stronger fire may you give, and if you will you may erect above the furnace 1, 2, or 3. partitions with their doors serving to divers uses according to the flame that is gathered into them, by reason of divers degrees of fire, which is in them, for the lowest is so hot, that it can easily contain in flux fusible metals, minerals, and salts; and serve for cementation, calcinations, and reverberations; also for burning of crucibles, and other earthen vessels, made of the best earth (of which in the Fifth part) and for vitrifications, and sometimes for trials and burnings, *&c.* The second division of heat, which is more remiss, serves for the burnings of minerals and metals as of lead, tin, iron and copper, that are necessary for calcinations; also for the necessary calcination of Tartar, and the fixed salt of other vegetables, that is required in chymical operation, as also the calcining of bones, and horns for cuples, and the ashes of wood. The third division or chamber is yet more remiss, and serves for the drying of crucibles, and other vessels that are made of the best earth, and afterwards to be burnt in the first partition. There may also other things be done by the help of these partitions, so that thou needest not for their sakes kindle a peculiar fire. But if thou wilt give a melting fire the strongest of all, put a long

pipe to the lower hole appointed for drawing wind, and having a register; for by how much the fire attracts the air more remotely and another flame is forced to beat upon the metals, so much the greater power of the heat is there in the fusion of them. For which business sake thou hast need to have as that inferiour pipe, so also that superiour pipe in the top of the furnace. And if thou hast a fit chamber, in which another may go up from below by the proper chimney, thou mayest build another furnace in the superiour chimney, and perforate the wall with the applying of a register, that the fire may be forced to attract the air from below through the collateral chimney, where you need not that long pipe but only may open a door, or window of the lower chamber, that the air may come into the chimney; and the fire attract the wind out of the collateral chimney, which it doth very vehemently, yea and stronger, than if it were helped with bellows, so that even the furnace, unless it were built of very good and fixed earth, would by too great a heat be destroyed; for oftentimes the strongest crucibles melt with too much heat, wherefore a register is made for the governing of the fire.

And by the help of this furnace, with Gods blessing, I found out my choisest secrets. For before, and indeed from my youth I underwent the trouble of those vulgar labours performed by bellows, and common vents, not without loss of my health, by reason of the unavoidable malignant and poysonous fumes, which danger this furnace was without, not only of poysonous and malignant fumes, but also of all excessive heat: For our furnace sends forth no fume (but above, so drawing, that the door being opened for the putting in of coals, it attracts by the vehemency of the fire, another fume, that is remote

by the distance of half an ell. And because the fire doth so vehemently attract, it keeps its heat within it self, so that there is no fear of burning; yet you must cover your hand that holds the tongs with a linnen glove twice double, and wet in water, and with the other hand a wooden fence that is perspectible to preserve your eyes; otherwise it wants all danger of vapours, or fumes, as hath been said, and all excessive heat; the which is a great benefit in Art. I do ingenuously confess, if I had not found this a few years since, I had not without loss left off all Alchymy together with its tedious labours. For I had spent many years of my life in great misery of labours, in superfluous cares, and watchings, as also in stinks, so that going into my Elaboratory with loathing, I should behold so many materials in so many, and such various pots, boxes, and other vessels, and also as many broken as whole instruments of earth, glass, iron, and copper, and did judg my self so unhappy that I had made my self a slave to this Art, and especially because scarce one of 100, whereof I was one, did get his victuals and cloths thereby. For these reasons I was determined to bid farewel to Chymistry, and to apply my self to Physick, and Chirurgery, in which I was always happy. But what? Whilest I thought to do as I resolved, and to cast forth of the doors all and each vessel of divers kinds, I found some crucibles broken, and in them many grains of gold and silver, formerly melted in them, which together with others gathered together, I thought to melt; but seeing I could not melt such things being very hard to be melted, without the help of bellows (which I had sold) I began to consider the matter with my self more seriously, and so I found out this furnace, and being invented, I presently built and proved it, which in

tryings I found so good, that I did again take hope of my labours, and would no more despair.

Seeing therefore an easie, and compendious way of melting metals, I began to work, and to begin a new search, and every day I found more and more in nature, *viz.* the greatest and most pleasant secrets of nature; wherefore I did without ceasing seek, until God had opened mine eyes to see that which I sought a long time for in vain. Where also I observed, that although I had before had more knowledge of nature, yet without this furnace I could scarce have done any thing that had been singular. And so God willing, by the help of this furnace, I found out more and more dayly, for which blessing I give to the immortal God immortal thanks, resolving to communicate this new invention candidly, and faithfully for the sake of my neighbour. Judge therefore O Chymist! whether this, or that which is made by the help of bellows and common vents, be the best? For how long doth he that will melt a hard metal in a wind furnace give fire to it before it will flow, and with what loss of time, and coals? He that doth melt by the help of bellows hath need of a companion to blow, with great danger of breaking the crucible with the winde, and of making it fall when the coals are abated, or of impurities falling into the crucible in case the cover thereof should fall off, although there can be no detriment by impurities falling in, if the matter be metallick, but not so if it be a salt or mineral, (without which that cannot be perfected in the fire) not induring the impurities of the coals, but boyling over by reason of them. Now our furnace is free from this danger, because the wind comes from beneath and crucibles come always into sight, not being so overwhelmed with coals as in the common way, *&c.* For by this means the matter to be melted is flowed,

although the crucibles be not covered over with coals, nor with a cover, and although thou hast not a companion to blow, for you may at pleasure give any degree of fire by the direction of the register. When therefore thou makest any trial in the fire have this furnace which is recommended to thee, which build rightly with its register for the governing of the fire, and for the drawing of wind, and without doubt this labour shall not be in vain.

How minerals are to be tryed.

The manner of trying minerals hath been already made known, wherefore it is not needful here to write many things, because divers Authors, as *Georgius Agricola*, *Lazarus Ercker*, and others have sufficiently wrote thereof, to whose writings I refer thee, especially to that most famous *Lazarus Ercker* which is so much commended, *De Probatione Mineralium*, as well maglignant (obstinate) as mild. But thus much know, being that which experience hath also taught us, that neither he nor his predecessours had a perfect knowledge of all things, nor would reveal all things they knew. For many excellent things do yet lye hid, and perhaps shall yet for a while lye hid by reason of the ingratitude of the world; although the most famous Philosophers do with one consent affirm that imperfect metals, as lead, tin, iron, copper, and Mercury, are intrinsecally gold, and silver, although it may seem very improbable to many that are not curious, but contented with the opinions of their parents; supposing those minerals to be barren that leave nothing in the cuple, when they are tryed with lead: when as yet that proof by cuples although famous, is not yet that true Philosophical trial of metals, but only vulgar, according to the testimony of

Philosophers, as of *Isaac Hollandus*, and others, especially of *Paracelsus* in many places treating of metals, but especially in his book *Vexationum Alchymistarum*, containing a true description of the properties, and perfection of metals. Which although not being to be understood by all, matters not; for a very easie art is not to be communicated to all, according to *Paracelsus* saying. Imperfect metals being freed from their impurities have in them abundance of gold, and silver. But how metals are to be purged, and separated he doth not teach, but only commends *lead* to be the Author; which made the Alchymist believe that it was common lead, not knowing that the water thereof (lead) did not only purge other metals, but also lead it self; supposing also that the trial of tin, copper, and iron, made in a cuple with lead to be that true genuine bath thereof; not observing that lead hath no affinity with iron, and tin in a stronger fire, but to reject what is black, and unclean, without any perfection. Now this lead can do, if *viz.* it be mixed with a mineral that hath gold or silver in it, and be melted in the fire being incorporated with it, it may together with their impurities enter into the Cuple, the good gold and silver being left in the Cuple, which is the proof of minerals that are digged, and used; and it is done upon this account, *viz.* gold and silver may be naturally purged of their superfluous sulphur, so as never to be any more radically united, and mixed with those that be imperfect, as being polluted with abundance of crude, impure sulphur, although they may be melted together in the fire; yet that mixture being retained in the fire, the combustible sulphur of common metals, acts upon its own proper argent vive, and turns it into dross, which being separated from the metals enters into the porous matter of the

cuples, that which doth not happen in tests, fixed in the fire, which that dross being separated from the metals cannot enter into, being made of an earth that is durable in the fire, the dross remaining in them, which otherwise was wont to enter into those cuples that are made of the ashes of bones, or wood. Wherefore by little and little it goes away into the cuple, *viz.* as much as the fire reduced into a Litharge, or dross, until all the Lead mixed with the Gold and Silver together with other imperfect metals mixed with it go into dross, and hide themselves in the cuple, the pure gold and silver being left in the cuple. For Lead in a plain vessel, feeling the heat from above, but beneath cold, is turned into a Litharge, which if it be in an earthen fixed vessel, the Litharge remains, and goes in a yellow transparent glass at last, if it be not mixed with other metals, as iron, copper, tin; which being mixed therewith, give to the glass a green, red, black, or white colour, according to the quantity of the metallick matter: but in a porous cuple made of ashes, the Litharge, or dross finding pores, enters into the cuple by little and little, and successively, until all the Lead be entred in, which could not be if it were not turned into Litharge. This vulgar trying is therefore nothing else but a transmutation of Lead, with the imperfect metals mixed with it, into dross, which entring into the cuple leaves in the cuple pure gold, and silver, that cannot be turned into dross by reason of their purity.

But perhaps this discourse may seem to thee unprofitable, and superfluous, because this trial of metals is known all the world over: but for answer, I say that it is not superfluous, because many refiners erre, supposing that corporeal Lead together with the imperfect metals that are mixed with it, goes into the

cuple, not being yet turned into Litharge, because corporeal Lead is again melted from thence; for whose sake this discourse is not properly ordained, as being those that operate out of use, and custom only without discretion; but rather for their sakes, who do incessantly seek after, and search into the secrets of nature, *viz.* seeking after that Philosophical tryal, which is known to few, by the help whereof more gold and silver is obtained than by the common way, but it is not to be discovered in this place; for all must not have the knowledge thereof; It is sufficient that I have demonstrated the possibility thereof. Yet know this, if thou knowest how to prepare Lead, Tin, Copper, and Iron, and to fit them for a radical union, *viz.* that aforesaid water of Saturn, so as they may endure the force of the fire together, thou mayst separate and attract gold, and silver from the aforesaid imperfect metals, and with gain leaving them in the cuple, or else you shall draw little or nothing from thence [*See Explicat. Mirac. Mundi.*] And if you do intend to try them with Lead after the vulgar way, and bring them into dross, yet you do nothing, because tin and iron abounding with gold and silver, do not remain with the lead in a strong fire, but are lifted up like a skin or dross, by reason of their superfluous sulphur, swimming like fat upon water, without any separation, unless it be tin or iron, which got gold or silver from the mine in their first fusion.

And by this means it falls out sometimes, that some may make a good proof, but out of ignorance, not knowing a reason of their operation, wherefore they cannot do the same again. For if Chymists, and Refiners did consider the matter more profoundly, enquiring the cause, wherefore lead being tryed, deprived of its silver, and melted in a cuple, should

yet contain in it self silver, without doubt they would hit upon a good foundation; without which knowledge all their labour in imperfect metals would be in vain. And let this suffice concerning that Philosophical tryal, which is known to few; There is no need of speaking any thing of that vulgar, being every where known, of which *Lazarus Ercker* wrote plainly and fully.

There is also another proof of minerals, which is without Lead, with Venice, or any other good fusible glass, where one or two ounces of the powdered mineral are mixed with half an ounce of the powdered glass, and being mixed and covered in a crucible, are melted, and poured out; by which means the glass attracts, and dissolves that mineral, and is thereby coloured, which shews what metal is contained in the mine, after which may be made another tryal by Lead, tryal being first made by the first proof. And this is the fittest proof for the hardest minerals, which are even invincible, as are the *Lapis hemititis*, *smiris*, granats, talck black and red, and those which abound oftentimes with gold, and silver, which because they cannot be mixed with Lead are not esteemed, but are oftentimes cast away, although they abound with gold and silver, and this because they cannot be tryed, Which being tryed after the aforesaid manner, and consequently the treasures lying therein being discovered, thou mayst afterward with more confidence handle them, and reduce them to better profit. Now those colours which follow, indicate the tenure of them. Glass resembling the greenness of the Sea signifies meer Copper, but the greenness of grass, signifys copper, and iron mixed together: glass of a rusty colour signifys iron: yellowish glass signfys tin, glass of a yellow golden colour, or like a red ruby signifys silver: Blew glass

like a saphir signifys pure gold; a smaragdine signifys gold mixed with silver: An Amethyst colour signifys gold, silver, copper, and iron mixed together. Besides these, glass sometimes gets other colours, according to the diversity of the weight of divers metals mixed together; which use will teach with a further practise that is to be made with Saturn.

There is also another precursory tryal of minerals, and metals, which is made with Salt-peter; where especially tin, iron, and copper do largely draw forth their treasures hid in them, which they will not yield being tryed by Lead, the which is not a sign of their poverty, but rather of not a true tryal made by Lead, which is not the true, and genuine judge, and tryer of metals. For otherwise (if it were) it would draw forth their treasure as well out of a greater quantity of metallick matter, as out of a lesser. Now follows the tryal by Nitre: Make a mixture of one part of sulphur, of two parts of pure Tartar, and four parts of purified Nitre, then take an ounce of this mixture, and one dram of the mineral or metal ground small, mix those together, and being put into a crucible, put a red hot iron or burning coal to them, and that mixture will be inflamed, and yield a most vehement fire, reducing that mineral or metal into dross: And what is not brought into dross must again be mixed with the aforesaid mixture, and be burnt as before, until the whole be consumed by the fire. Then make that dross or salt containing in it the metal that is destroyed, to flow so long in a strong crucible, untill it be made glass; which being poured out there are found grains of gold or silver, which came from the mineral or metal that was tryed. And this opperation (if it be well done) will be a pleasant sight, but without profit, because it cannot be done in a great quantity, and by reason of the price of the Nitre.

Wherefore I set this way of tryal only for demonstration sake, that it might appear how almost all tin, iron, and copper, contain in them gold and silver, although they do not draw it forth in the Cuple.

Now do not suppose that this is transmutation, which is only separation; wherefore thou must consider with thy self how that may be performed otherwise. But take heed that thou do not kindle this mixture from beneath, being put upon the coals, but from above, by reason of the danger of flashing: Also metals are easily fusible by the following mixture. Take one part of the saw-dust of the wood of the teil-tree being well dryed, two parts of sulphur, eight or nine parts of pure Nitre. Make *stratum super stratum* in a crusible, and take to 11, or 12. parts of this mixture; one part of the metal subtilly ground, and kindle them, and the mine being melted will yield grains of pure Gold and Silver, if the mine were not too impure, the impurity thereof be consumed by that most vehement fire. And if this tryal be not for thy profit, yet it is rational, and may be for thine instruction.

Of the melting of mines and metals.

The melting of these in a great quantity is not for this place, because they cannot be done by this furnace, but it is treated of plainly enough by others in their writings of minerals.

Of the separation of metals.

This is a most ancient and profitable Art, whereby one metal may be separated from another: And it is for the most part done 4. ways, *viz.* by *Aqua Fortis*, by cement, by flux with sulphur, and lead, and lastly by

Antimony; which ways that most witty *Lazarus Ercker*, hath clearly, and distinctly described, whose description is not to be found fault with, although some necessary things may be added thereunto, which being but few, I thought it superfluous to add them in this place.

And that separation consists in three chief metals, Gold, Silver, and Copper; he made no mention of other metals, and two of the aforesaid four ways are in use, as very easie, for they are done with *Aqua Fortis* and Cement, the two others most commonly neglected, which are done by benefit of melting with Sulphur and Lead; and also by Antimony: that which is admirable, because metals are easier separated by benefit of these two ways, than by *Aqua fortis* and Cements, suspected of wast, whereas not Sulphur and Antimony, but the ignorant worker, not knowing the nature of Sulphur and Antimony, is rather to be blamed, because he knows not how to order them, and withall leaves the nearer way of separation: and I must needs confess it that without this furnace I would not separate with them, because with that common way of furnaces and bellows, the stink of Sulphur and Antimony hurtful to the Liver, Lungs, Brain, and Heart, is received by the Nostrils to the hazard of health: for which cause I do not wonder that those two wayes requiring greater diligence than those two former by *Aqua fortis* and Cements are rejected. But this Furnace being known, with which without danger one may melt, I doubt not of excelling the two former ways hereafter as more profitable than them. For he who knows Antimony, may not only easily with small cost separate Gold from the addition without any loss of it, and speedily refine it, but also easier separate gilt silver, than by Sulphur, Lead, *&c.* in great store without any loss of

Gold or Silver.

And this is the easiest way of the separation of Gold and Silver which is done by the benefit of melting, requiring no more charge than the coals; for there is Antimony which hath Gold in it as much as it is worth, which will be the separators gain: I would have you know this, how Antimony may again be separated from Gold and Silver, not by the common way, which is done by bellows, but by the special way of separation wherewith the Antimony is preserved, so that it may be used again for the same purpose; which I will treat of in another place. Besides the four ways spoken of, there is also another way, best of all, by the nitrous spirit of salt, namely after this manner: ℞ the spirit of salt (prepared by our first and second Furnace) acuated with Nitre disolved in it, to which add grain Gold mixed with Silver and Copper; put it in a glass vial in hot sand to dissolve, and the Gold together with the Copper will be dissolved in it, and the Silver left in the bottom of the vial: decant off the solution, to which add something, precipitating Gold, and make them boyl together, and the pure fine gold will be separated and precipitated like the finest meal, serving Writers and Painters; the Copper being left in the water; which thou mayst if thou wilt precipitate from the water, but it is better to take away the water, which will serve again for the same use. If the precipitated Gold be washed and dryed it gives in the melting (by which nothing is lost) the best and purest Gold. For finer gold can neither be made by *Aqua fortis* nor by Antimony.

Therefore this is the best way of all, not only for the small cost, but also for the easiness yielding the best Gold of all others.

Then take the calcin'd Silver left in the gourd, sweeten and dry it, which done make a little salt of Tartar to melt in a crucible, to which by course put a little of the refined silver with a spoon, and it will be presently made a body without any loss. You may also boyl that Calx as yet moist newly taken out of the gourd with a Lixivium of Salt of Tartar, even to the evaporation of all moisture: and melt the dry remnant, where also nothing is lost. Without this medium the calx of Silver (drawn from *Aqua Regia*) is not fusible of it self, turning into a brittle matter, like horn that is white, or of a middle colour between white and yellow, called therefore of Chymists the *Horn of the Moon*; in reducing which many have tried much, which reduction we have already taught. For want of spirit of salt take *Aqua Regia* made of *Aqua Fortis* and salt Armoniack, which doth the same, but with greater charges. This also is to be preferred before other ways, which makes to the separation of any Gold of any degree, if so be it exceed Silver in weight; which is necessarily required in the solution made with *Aqua Fortis*.

But that you may see the prerogative of this separation, mark a little, when you separate by the *Quarto* and by *Aqua fortis* you must put just two or three parts of refined Silver to one of course Gold, where first the cost and labour of refining the Silver to be melted and grained with Gold are required: then a good quantity of *Aqua fortis* to dissolve, precipitate, edulcorate, dry and melt a great deal of silver. Consider then I pray, the labours and charges of my separation and the vulgar. When thou separatest with Cements there is need of boxes, and continual fire of one degree, which labour is tedious for times sake, and costly for coals, which labour you must twice or thrice take in regard of the mixt dross.

Now again consider the labour and charges of both separations. When thou separatest by Sulphur and Antimony, which is the best way, without great charges, if thou knowest to separate Gold from Antimony without blowing, but this is tedious because thrice greater labour than our way, tedious indeed by reason of the difficulty of a perfect separation of Gold and Silver from the Antimonial dross. Think therefore what way of separation you will use to refine Gold speedily, surely you will chuse mine.

This way of separation hath also this prerogative, that it hath no need of refined silver which is done by the benefit of burning, but only its granulation, solution or separation by the use of *Aqua Fortis*, where though copper mixt with silver makes wast, yet by the help of this salt it is soon precipitated. By this means gilt silver is soon separated, the gold being dissolved by the nitrous spirit, and precipitated with the aforesaid matter precipitating. As for the separation of gilt silver which is to be done by help of fusion, and none is easier done than with Sulphur and Antimony, where when the necessary manual (ingredients) are known; a great deal is separated in a short time, but if thou knowest not how to handle Antimony and Sulphur (for which our Furnace very well befits) leave them, and use the common way; therefore lay not thy fault afterward on me, writing for thy good.

Of separating the courser metals.

The manner of separating Tin from Lead, and Copper from Iron, without loss of both metals, by preserving both, hath hitherto been unknown, which seems impossible to me by reason of the combustibility of

both metals; and superfluous for the small profit, and saving charges. But how Gold and Silver may be separated from Tin with which commonly this abounds, without any wast, hath been long since sought to no purpose: but a possibility will appear to a serious considerer; and though I never tryed in great quantity, being content with a precipitation made with a little; I am yet perswaded this business will succeed in a great quantity and with much profit; namely by the help of a Furnace made on purpose where gold and silver precipitated with lead and *Halb Kopf* by extream heat of fire; that tin is extracted to the remanence of the tenth part, which remainder you must peculiarly take and keep. Which done you must precipitate new tin in the foresaid Furnace, and so extract to the remainder of the *Regulus*, which being extracted from, is to be added to the first and reserved; which labor is to be reiterated, till thou hast a sufficient quantity of *Regulus* filling the Furnace; which again thou must precipitate; for by this means gold and silver are brought together, so that they may easily afterward be separated from the superfluous tin. By this means I count the separation profitable, where but little substance is lost, which is turned into ashes and smoak. Nor doth adding lead and *Halb Kopf* hinder, because sometime lead is mixt with tin, and the *Halb Kopf* is separated again. It is good therefore to separate pots and old dishes, by reason of the mixture of lead, and to precipitate the gold and silver from them, by the adjection of *Halb Kopf* only, where the residue is no way altered by the *Halb Kopf*, therefore thou mayst sell it, or refine it again: which in my judgment will be to great advantage.

What is to be held concerning the perfection of Metals.

This knot is scarce soluble, for so many and divers opinions of so many ages, so that most men slighting the testimonies of true Philosophers, will not believe the truth, especially, because scarce one of an hundred can be found who is not impoverisht with this art: the incredulous therefore is not to be blamed for his doubting, no signs of truth appearing, yet experience testifies a possibility by art and nature, though examples are rare. I pray with how great absurdity should one deny Heaven and Hell never seen? But thou saist we must believe this as revealed by God, his Prophets and Apostles; but so is not this, but the Philosophick tradition of Heathens. I answer, though most Philosophers were heathen (yet some have been Christians) yet their works are not to be despised, because not handling our salvation: to whom if CHRIST had Preached, surely they had believed him. For it appears by their books, that they were pious and honest Men; who though not Professors of CHRIST, yet they did His Will indeed, which we, though not in words, in action deny; who if they had been wicked, why took they so much pains in making books for the good and profit of their Neighbour about Vertue and Piety? Why spent they not rather their life time in leisure and pleasure, as is the custom now adaies with them who are appointed to instruct us? Why should they gull posterity with trifles and lyes, expecting from thence no profit? For most of them were not poor, but very rich Kings and Princes. Besides these, there have been many Christians seriously confirming the truth of the Art: Men indeed of special note, namely, Bishops, Doctors, *&c.* Such were *Thomas Aquinas*, *Albertus Magnus*, *Lullius*, *Arnoldus*, *Roger Bacon*, *Basil*, &c. Why should very pious men deceive posterity with their Works, and lead them into Errors?

Although there should not remain the Works of Famous Worthies, yet there would be a plain confirming the truth of this Art. For I am perswaded there are some to be found having this knowledge, and privately possessing it. For who is so mad to reveal himself to the world, to receive nought but envy for his reward? Let no man therefore doubt of this secret Art's truth. But say you: Why stand you so much for the Art? Did you ever see or perform any thing in it? I reply, though I never made projections to perfect metals, nor saw transmutations; yet I am sure of this, I have often from metals with metals, leaving no gold and silver in the cupel, extracted gold and silver by the help of fire: But I will not have you think that one imperfect metal will perfect another, or turn it into gold or silver, impure and drossy without, in comparison of gold and silver; for how can such metals perfect another imperfect? Which thus understand. For as in the vegetable Kingdom, water cleanseth water, or juice with seething as is wont to be done in purifying honey and sugar, or any other vegetable juice, with common water, and white of eggs: so also you must understand of mineral juices or metal, of which if we know the water and white, surely we might refine the impurity, in which gold and silver lie hid, as in black shales, and powerfully extract gold and silver, which is not a transmutation of metals, but an eduction of gold and silver from the dunghil; Dost thou ask how Gold and Silver can be educed from copper, iron, tin, and lead, to wit, by the help of lotion, out of which none is drawn with that best proof (as 'tis thought) of Cupels? To which we answered before of the proof of Cupels not to be sufficient for all the several metals. I need therefore say no more, but I refer the studious Reader to

Paracelsus his Book, the *Vexation of Chymists*, where thou shalt find another lotion and purification of metals, which heretofore was unknown to Miners and Dealers in Minerals. As for example: A Miner finding the oar of copper, useth his skill delivered by the ancients to his utmost endeavour, whereby he may cleanse it and reduce it to metal: where first he breaks it into pieces, and boyls it, for to take away the superfluous sulphur, then by vertue of melting, he brings it into a stone (so called) which afterward again he commits to fire, and freeth it by the addition of lead, of its gold and silver; which done, he blacks and redens it, turning it into copper, which is his last labour, whereby the copper is made malleable and vendible: which done, the Chymist coming, tries another separation, by whose help gold and silver is extracted, as yet tryed of very few, of which mention is here made. *Paracelsus* also saith in the same place, that God hath given some an easier way of separating gold and silver from courser metals, and indeed without refining the oar, which is a special and curious Art, which he teacheth not in plain tearms, but only saith it is sufficiently taught in seven rules of that book, where he treats of the nature and propriety of metals; in which you may seek it. And this purification of courser metals I count most easie, which I have often tryed in small quantities: and I doubt not but God hath shewn other Artists also other purifications by which imperfect metals are perfected; for example, if one would purge the fruit of the earth by distillation, so that the dregs and impurities being taken away, it would grow up with a new clear clarified body: as if one distil black and impure Amber by a retort, the separation would be made by Fire, of the water savouring of an *Empyreum*, of the oyl and volatile salt, and the *Caput*

mortuum be left in the bottom of the retort; by which means, in a very short time without great labour, is made a great alteration and emendation of Amber, though the oyl be black, impure, and stinking: but if it be again distilled by a retort with some mundifying water, as with the spirit of salt (namely through a fresh clean glass retort) there will be made a new separation by that spirit of salt, and a far clearer oyl will be extracted; the dregs with the stink left in the bottom of the retort, which afterward may be twice or thrice rectifyed again with fresh spirit of salt, until it get the clearness of water, and sweetness of sent resembling Amber and musk.

And this transmutation makes of a hard thing, a soft; unlike the former in shape, which though never so soft and liquid, oyly, may again be coagulated, so that it becomes as it was at first, after this manner following. Take the said oyl very well clarifyed, add to it fresh spirit of salt, set it in digestion, and the oyl will attract from the spirit of salt, salt enough for its own recoagulation, and again it acquires the hardness of Amber, of an excellent clear and admirable colour; of which half an ounce is worth more than some pounds of black Amber; of which scarce the eight or tenth part remains in purifying, all the foul superfluities cast away.

By this means I think one may cleanse and mend black metals, if so be the manner of their cleaning were known by distillation, sublimation and recoagulation. But thou say'st that metals cannot like vegetables be purified by force of distillation, to which I present our first furnace not given to peasants, but Chymists, purifying metals; so also the possibility of their perfection is shewn by help of fermentation. For as fresh leaven can ferment the

vegetables juices, which are perfected by fermentation, the dregs being cast away as one may see in wine, ale, and other liquors, whose lasting and perfection proceeds from no other thing but fermentation purifying the vegetable juices, without which they could not otherwise withstand the Elements, subject to corruption in a very short time, which fermented last some years: so also if we knew the proper ferment of metals, surely we might refine and perfect them, so that they not being any more subject to rust, would be able to prevail against fire and water, and be nourished and fed by them. For so the world heretofore perished with water, and shall at last perish with fire, and our bodies must rot and be purified by fire before we come to the sight of God. And thus far of the fermentation of metals, wherewith they are amended and perfected. Metals also are purify'd and amended like milk set on the fire; whose cream the better part (the substance of butter) in the top is separation from the whey and cheese, and the hotter the place is, the sooner the separation is made even, so it is with the separation of metals; where metals put into a Fitted hot place by themselves without any addition of another thing (the metals being before reduced to a milky substance or curd) are separated in time, by parting the nobler parts from the ignobler, opening a great treasure: and as in winter time milk is hardly separated with a weak heat; just so metals if not helped with Fire, as one may see in iron, which in a long time under the earth is turned into gold without Art. For often iron oar is found with golden veins very goodly to behold, severed from the course, earthy and crude sulphur, by force of the central heat. And commonly in such oar no vitriol is found, being separated and bettered by its contrary. But a

long time is required for that subterraneous separation, which Art very speedily performs; as is wont to be done with milk in winter when we presently make butter of it, when we put it to the Fire to part the cream speedily; which separation is helped by the precipitation made with acid things, mortifying the urinous salt of the milk, by which means all principles are separated by themselves, as butter, cheese, whey: so in a quarter of an hour separation is made by boiling, which else without acid things could not be done in some weeks. If then it be possible in vegetables and animals, why not in minerals? For what but gold and silver is found in lead, iron, tin and copper, though it doth not appear? Why is all goodness denyed to the courser metals granted to vegetables and animals not equal to them for lasting? Whence is the natural perfection of lead, tin, iron, and copper to be proved? Nature ever seeks the perfection of her fruits; but course metals are imperfect; Why then is not nature helped with Art in perfecting them? But the bond of metallick parts is worth observation, which being broken, the parts are separated. Urinous salt (as I may say) is the bond of the parts making milk, as of butter, whey, and cheese, which is to be mortifyed by its contrary acid for separation. But in iron the parts are bound with a vitriolate salt, as with a bond, which is to be mortified with its contrary, urinous or nitrous salt for separation. He therefore who knoweth to take away the superfluous salt of iron, either by moist or dry means, doubtless shall have iron not soon subject to rust.

Fire also hath incredible force of it self in changing metals. Is not steel made iron by force of Fire, and iron of steel by different proceeding? Experience dayly teacheth us also divers kinds of changes and

refinings by Fire; why is it not possible in metals by an expert Chymist having skill in them? Who would believe that a live bird lurks in an egg, and an hearb having leaves, flowers, and odour, in the seed? Why may not then abortive metals, getting not yet perfection, be perfected by Art, with help of Fire? Is not an unripe apple or pear ripened by the heat of the Sun? Which some curious and industrious men observing, have imitated nature in their works; and have found some metals not destroyed with the heat of Fire, but enriched with a secret gainful heat; so that melted (digestion being made) they have yielded double weight of gold and silver. Yea I my self have seen the common oar of lead digested after the aforesaid manner, which was not only inriched with silver thereby, but also partaked of gold which it wanted before in ordinary tryal. Besides one might work this in great quantity, as with an hundred pounds; which work of minerals will without doubt bring great profit to the skilful triers of lead: But know this, that not every tryal of lead will be furnished with gold, but the oar to be ever enriched with silver, experience being witness.

Many such things are found in Nature incredible to the ignorant, and those that are unexercised. But if we mortals were more diligent in reading the book written with the hand of God in the pages of the four Elements, surely we should Find more secrets and wonders in them, but skill and wealth is got with sweat of face and not by sloth; therefore *labour* and *pray*. Metals are also meliorated by the help of gradation like to germination.

For it is well known, that the shoot or grass of some fruitful garden-tree implanted in a wood, makes that tree afterwards to bear not wild fruits,

but very good and sweet like them of the implanted shoot, as one may see in iron dissolved in an acid spirit, fermented with Venus and turned into Copper: by which means doubtless copper is turned into silver, and silver into gold, if the true manner of fermentation were known.

Now this transmutation is like digestion, making beef or horse flesh of grass in the stomach of oxe and horse, and mans flesh of beef, in the stomach of man.

The better parts also are separated from the worser by the attractive strength of the like, as is to be seen in a metal abounding with sulphur, to which if iron be added in fusion, the sulphur deserts its native metal, (by which means it is more purifyed) and joins its self to the iron, with which it hath more affinity and familiarity, than with its own metal; for example, if iron be added to lead oar full of sulphur in the melting, this melted metal is made malleable, which else would be black and brittle. And if something else to be put to the melted malleable metal were known to us, to take away in the melting, the redundant, crude, combustible sulphur, questionless it would yet be made purer; which thing being unknown, metals remain in their impurity. And indeed God hath done well in this as in all other his works, that he hath concealed his knowledge from us: for if it were known to the covetous, they would buy up all lead, tin, copper and iron, to turn into gold, so that rurall and poor Labourers could hardly buy metallick instruments for their use, for the scarcity; but God will not have all metals turned into Gold.

A Similitude of taking away the superfluous sulphur of some metals in fusion, being given to keep the purer parts; so likewise is there another manner

of separating, the purer parts from the impure, namely, by the attractive power of the like, where the purer parts are drawn together by their like, the impurer and heterogeneous part is rejected: and that may be shown as well by the moist as dry way; an example of the moist way followeth.

If quick Mercury be added to impure gold or silver dissolved in its proper *menstruum*, the mercury draws to it self the invisible gold and silver from the *Menstruum* and mixt impurity and associates what is purest to it self, which separation swiftly succeeds. Mercury performs the same likewise in the dry way: namely, when some earth having some gold and silver, is moistned with acid water, and they are so long bruised together, till the Mercury draws the better part; which done you must wash the dead earth left, with common water, and separate the Mercury being dryed from the attracted gold and silver, by trajecting them through a skin, but the Mercury draws but one metal from the earth, and indeed the best at one time; which being separated, it draws another metal; for example, if in some one earth, gold, silver, copper and iron ly hid, the first time the mercury draws the gold, the second the silver, but copper and iron hardly by reason of their dross, but tin and lead easily, but easiest of all gold by reason of its purity like to mercury.

Another Demonstration by the dry way.

Put under a tile a cuple with lead, to which add a grain of very pure gold, most exactly weighed (for memories sake) make the gold in the cuple to fulmimate, and the lead will enter the cuple, the gold being left pale in the cuple: of which pale colour there is no other cause than the mixture of silver,

drawn from the lead by the gold. But thou wilt say, that thou knowest this, that gold fulminated with lead, is made paler and weightier, by reason of the silver in the lead, left with the gold in the trial, augmenting the weight, and thence making it pale: to which I reply, though lead leave some silver in trying in the cuple, mixt with the gold added to it, augmenting its weight, and changing the colour; yet it is proved by the weight, that lead leaves more being mixt with gold in the cuple, than when tryed without gold. Hence it is proved, that gold in the fire draws its like from other metals, augmenting its weight: and this also gold doth in the moist way: for if it be dissolved in its own *menstruum*, together with copper, and put in digestion, and then separated, it attracts gold from the copper; which labour, though not done with profit, yet witnesseth a possibility. But if the *menstruum* of gold augmenting the attracting power of gold or multiplying the same were known, but diminishing the retentive power of copper, doubtless some gain were to be expected; and indeed more, if gold and copper, together be melted in fire with the dry mineral *menstruum*; by which means the weight of gold would be increased according to *Paracelsus* saying Metals mixt together in a strong fire, continued a pretty while, the imperfection vanisheth and leaves perfection in its place.

Which surely well done, is a work not wanting gain. For I freely confess, that I would sometime incorporate silver with iron, when as gold from iron gave me a good increase of pure gold, instead of fixt silver sought after. And by this means often some not thought on thing happens to Artists, as to my self with fixt silver, not rightly considering the business. Therefore medling with metals, be sure when you find some encrease, to weigh well what it was at

first. For many think long trying silver with iron, by the Blood-stone, Load-stone, Emraud, *lapis calaminaris*, Red-talck, Granats, Antimony, Arsenick, Sulphur, Flints, *&c.* having mature and immature, volatil and fixt gold in them, finding in the trying good gold; that this gold is made of the silver by the help and use of the foresaid minerals, which is false, For the silver drew that gold out of those minerals, in which before it lurked volatile. Yet I deny not the possibility of changing silver, as being inwardly very like gold, but not by help of cementation with the said minerals, because that gold proceeds not from the silver, but those minerals, attracted by the silver. This labour is compared to seed cast into good ground, where dying, by its own power it draws its like to it self, whence it is multiplyed an hundred fold.

And it behoveth in this work now and then to wet the metallick earth, with proper metallick waters, being dryed up with heat (which operation is called of the Philosophers inceration) else the earth will be barren, and it behoveth that this water be neer in kind to the earth, so that when they are united they yield a certain fatness. For as it appears from sandy dry earth, moistened with rain water, not bringing forth fruit agreeable to its seed, for the small heat also of the Sun consuming the moisture, and burning the seed in the earth, which mixt with cows dung or other, keeps the water so as that it cannot be so soon consumed. By the same reason it is necessary that thy earth and water be mixt, lest thy seed be burnt up. Which work if well handled, it will not be in vain, requiring the exceeding diligence of nourishing the earth with warmth and moisture, when the earth is drown'd with too much moisture, or hath too little, it cannot increase, and this is one of the best labours,

with which I draw forth good gold and silver of baser metals, requiring the best vessels, retaining the seed together with its earth, and water in its proper heat. I doubt not but this work also in a greater quantity, may be performed, firmly beleiving that the courser metals, especially lead, the fittest of all not only to be perfected into gold and silver, but also into good medicine: which without question is a Philosophick labour granted from God, as a great comfort to the Chymist, but warily to be used. For that all and singular Gods gifts he will not have common: as indeed I have found, when I had invented a very excellent work, that I shewing it to a friend, neither could I afterwards teach it to him, nor do it again for my self. Therefore indeed justly men are doubtful in writing such matters: for many seek with idleness to get the inventions of others, performed with great costs and labour. Therefore it is safer to be silent and give leave to seek, than to publish secrets, that they may undergo the pains and charges to be born in inventing high matters; nor any more hereafter may the ingrateful so impudently gape after others Labours. Therefore I would entreat all men both of high and low degree, that they would not molest and tire me hereafter with their Petitions and Epistles, and that they would not turn my good will of benefiting others to the ruin of my self, but be contented with my writings published for the profit of my neighbour. Nor do you think that I possess and promise golden mountains. For what I have written, I have writ to discover nature, in these discourses of the perfection of course metals in small quantity; For I never made trial in a great quantity, trying truth and possibility in a lesser only, in small crucibles: therefore those things which I have writ are written to that end that the possibility of the Art, may

appear, of perfect metals to be wrought out of Imperfect, therefore he who hath occasion may make trial in a greater quantity: but as for my part wanting opportunity, I expect Gods blessing, whereby upon occasion I may make tryal in a greater quantity, and so receive the fruit of my labour and great charges.

Also metallick bodies are transmuted by another means, namely by the benefit of a tinging metallick spirit, as one may see in *aurum fulminans*, sometimes kindled upon a smooth clean metallick plate, fixing a very deep golden tincture upon the plate, so that it may bear the Touch-stone. The same also happens in the moist way, where plated metals put into a gradatory spirit made of Nitre, and certain minerals, being pierc't by the spirit, obtain another kind agreeing to the spirit. But if one doubt of the metallick gradation, made with *aurum fulminans*; he may try the certainty from the often fireing of fresh *aurum fulminans*, upon the same plate; for he shall see that it is not the colour of the metal, and outwardly gilded, but deeply tinged. Likewise one may try the certainty by a humid spirit, if the transformed metals are tryed, whence the mutual action and passion of subtilized spirits plainly appears, for the power of spirits is very great, and incredible to one not exercised; and this gradation of inferiour metals, Philosophers both ancient and modern, doe not only confirm, but also diggers of minerals taught by experience, that mineral vapours by penetration change courser into purer metals, *Lazarus Ercker* being witness, that iron is changed into a good natural copper in green salt waters, & that he saw a pit, in which iron nailes and other things cast in, by the penetration of a cupreous spirit were turned into a good copper. I do not deny that metallick dissolutions of some metals do stick

precipitated to the plates, and to make them of a golden, silver, or cupreous colour; for it is well known, that iron cast into a vitriol water not to be turned into copper, but to draw copper out of the water, of which thing we treat not here, confirming the possibility of metallick transmutations by a tinging and piercing spirit; therefore I again maintain that great power is in metallick spirits; look only upon course and opake earth, and besides that clear and limpid water with which the clearer and more powerful air proceeding from the water cometh from the earth. Are not whole Countries drownded with water, sometimes Towns and Cities taken away? Cannot the air destroy the strongest Houses; especially shut up in the Earth, shake the Land for some miles, and afterward demolish whole Cities and Mountains with the death of Men? all which things are done naturally. Wind artificially raised by Nitre threatens a far greater danger, which no man can deny. Although that corporeal Elements exercise so great power, yet they cannot pierce metals without hurt, nor stones and glass, and things soon penetrated by fire. Therefore not by an occult but a manifest power of Sun and Fire, which it hath over metals, stones and glass, which are easily pierc't by them without any impediment: and why should not metals compact of a certain metallick subtile and piercing spirit be penetrated by help of fire, and changed into another species? As is already spoken of *Aurum fulminans* and *aqua gradatoria*. Therefore there is no doubt of the possibility of the metallick tingent spirit changing courser metals into finer, both by the dry and moist way; For Metals may be purified the same way as Tartar and Vitriol, and other salts, namely by the benefit of much water. For it is manifest that vitriol is purged with iron and

copper mixt with it, namely dissolved and coagulated in much water, so that it waxes as white as allom; which purification is but a separation of the metal from the salt, made by the benefit of much water debilitating the salt, so that it cannot longer retain the mixt metal, which is precipitated like some slime, not unprofitable, because the chiefest part of the vitriol, from which is the greenness, *viz.* Copper, Iron, and Sulphur. And as by help of separation metals are drawn from vitriol, more perfect than salts; so also it is with metals when the perfecter and better part is separated by help of precipitation: as for Tartar, it is purified by the addition of water, but its better part is not precipitated as in vitriol, but the courser part which is its blackness and fæculency. As for example; Common Tartar by the often solution (made with a sufficient quantity of water) and coagulation is made very pure and white, because in every solution made with fresh clear water, it always becomes purer; and not only by this means white Tartar, but also red and feculent, is reduced into transparent crystals, and indeed very speedily by vertue of a certain precipitation; whose limosity is the cause of the obscurity of the crystalline salt of tartar, and is nothing else but an unsavory thing, dead and useless, mixt with the tartar in its coagulation in Hogs-heads of Wine, and separated again by power of solution.

And these examples of the two salts of Vitriol and Tartar, are not in vain set down, because they shew the difference in precipitation: For in some Metals, by force of precipitation, the courser part is separated; but in other, the better and choicer, according to the prevalency of this or that part.

In Vitriol, the better part (Copper and Iron) is the

least, which is precipitated and separated from the courser and greater part, *viz.* Salt; But, in Tartar, the courser and less part is precipitated and separated from the greater and better part clarify'd: The like is in Metals. Therefore, let every one be wary in separating; and consider before, whether the better or courser part of the Metal is to be precipitated; without which Knowledge, no Man can meddle with this Business. Let also the Workman be ware, who expects any profit from his labour, of Corrosive Waters; as *Aqua fortis*, *Aqua Regia*, Spirit of Salt, Vitriol, Allom, Vinegar, *&c.* in the Solution from which no Good proceeds, as utterly destroying and corrupting all and each of them; proving the same in these words, *From Metals, by Metals, and with Metals, Metals are made perfect.* Metals are also purified, maturated and separated from their Vices, by Nitre burning up the superfluous Sulphur.

And all the aforesaid perfections of metals are but particular. For every particular medicine, as well humane, as metallick, purgeth, separateth and perfecteth or amendeth by the taking away the superfluity. For a universal medicine worketh its perfections and emendations, by strengthening and multiplying the radical moisture as well of animals as metals, expelling its enemy by its own natural vertue. But thou sayst excellent examples indeed are delivered by me, but not the manner of doing them. *R.* I have delivered more then you think, although you don't perceive it: for I am sure after my death that my books will be in greater esteem, from which it will appear that I have not sought vain glory, but the profit of my neighbour to the utmost of my power. But do not, seeing my freeness of writing, think that you may wrest many things from me. For assure your self, that although I have written many

things for the publick good, yet I intend not by this means to trouble my self. For I cannot satisfy the desires of all men, nor answer their Epistles, nor inrich all men, who neither am rich my self, nor have sought riches. For although I have gotten the knowledge of these things by Gods blessing, and have tryed the truth of it in small quantity, yet have I never made experience in great store for wealth sake, being contented with Gods blessing.

And let this suffice concerning the several purifications of metals according to my experience; as for that universal medicine so famous, I cannot judge of it, being a thing unknown to me; but the possibility thereof I am forc't to affirm, being moved with the several transmutations of metals; which being unknown, it behoves us to be contented with that favour which God hath bestowed on us. For oftentimes questionless it is better to know little, for Eternal Salvations sake; for most commonly wealth and learning puff up. And pride brings to the Devil the Author of it, from whence God of his mercy preserve us.

Of the Philosophers Stone.

I have undergon much charge and labour for many years, to extract the tincture or anima of gold, for a medicine to be made therewith, which at length I have obtained, where I have observed the remainder of the gold, the soul or better part being extracted to be no more gold, nor longer to endure fire. Whence I conjectured, that such an extraction being fixt again, can perfect courser metals and turn them to gold: But I could not hitherto try the truth of my conceived opinion living at this time in a forraign place; therefore against my will, although greedy of

novelty, I have been forc't to abstain from the work. In the mean time considering the opinions of the Philosophers concerning their gold, not the vulgar, asserting the universal medicine to be prepared therewith. I have again affused a certain Philosophical Vinegar to Copper for to extract the tincture, where almost all the Copper like whitish earth is separated from the tincture in digestion, which earth by no Art I could again reduce into a metallick body.

Which experiment again confirmed me of a possibility of this Medicine. Which labour though I never followed, yet I doubt not but an humane medicine, though not also a metallick is attainable thence by a diligent workman. The soul therefore with all the metallick attributes, consisting in so small a quantity, which is scarce the hundredth part of the weight, which being extracted and separated, the remaining body is no more a metal, but a useless and dead earth; but it is not to be doubted but being fixt again, it may reassume and perfect another metallick body. Therefore I am confidently perswaded by the aforesaid Reasons, that such a medicine is to be made of mineral and metallick things, *viz.* in the flowing, changing baser metals into better. But do not think that I writing these things make gold or copper the matter of this medicine, which I do not hold, well knowing that there are other subjects easily to be handled, abounding with tinctures.

So thou hast heard now my opinion of the Universal Medicine, which my experience in Gold, Copper, and other Minerals and Metals hath caused: which I will not preach for *Gospel*, because it is human to erre.

Therefore no certainty is to be had, before its final and compleat perfection, and indeed once or twice tryed for certainties sake. For an excellent way once found out, cannot alwaies be often repeated, which happens doubtless as well to others as to me. Therefore we must not triumph before the Victory; for unthought on impediments may frustrate Hope: but God is rather to be implored in our labours, that he would be pleased to bless our endeavours, that we may use well his gifts in this life as good stewards, and afterward bestow the free reward of our labours, watchings, and cares on us sinners, namely, everlasting Rest and Salvation out of his meer Mercy.

Whether Minerals, as Antimony, Arsenic, Orpin, Cobolt, Zinc, Sulphur, &c. *may be transmuted into metals, and into what?*

It is long since debated among Chymists, whether the aforesaid Minerals proceed from the same principles with Metals, and whether to be counted Metals; in which Controversy they have not agreed to this day, when as one approves that which another denies, so that a student of Chymistry knows not to what side he had best assent.

But this knowledge not a little helping, concerning the purifying of metals, I would put my opinion also grounded upon experience, for the satisfying the doubtful, the simplicity of them is strange who hold not one and the same beginning to be of minerals and metals, saying, if metals might be made by nature, of minerals surely it had long since been done; but it never was, experience witnessing; for remaining minerals, they are never transplanted into metals. I Answer, metals grow one way, also vegetables another, soon budding, and again soon

dying; but it is not so with metals; for all lasting things have long time of digestion, according to the saying, *That which is soon made, doth soon fade*; this is to be understood not only of vegetables and minerals, but also of animals, as appears from the budding of some vegetables, coming in six Months space to their perfection, and then again perishing: when as things requiring longer time of digestion and perfection are much more lasting. A Mushroom in the space of one or two nights grows out of rotten wood, again soon vanishing: not so the Oke. Oxen, and Horses in the space of two or three year come to perfection, scarce living the twentyeth, or twenty-fourth year: but a Man requiring twenty four years to his perfection, lives sixty, eighty, or an hundred years. So also we must conceive of lasting metals requiring many ages, and also very long time of digestion and perfection; metals therefore requiring a very long time of digestion to their perfection, it is granted to no man ever to see the beginning, and end of them; the transplantation of minerals into metals by nature cannot be denyed; especially, because that in the oars of metals, especially of course ones, minerals are also found; wherefore diggers of minerals, when they find them, conceive good hopes of finding metals, of which they are termed the *Coverlids*, for seldom metals are found without minerals, or minerals without metals; nor also are ever minerals found wanting gold or silver; therefore minerals are properly termed the *Embryo* of *Metals*; because by art and fire a good part of gold and silver is drawn out of them by fusion; which if they do not proceed from the metallick roots, whence proceeds that gold and silver? For an Ox is not born of an Infant, nor a man of a Calf; for alwaies like is produced of its like.

Therefore minerals are counted but unripe fruits in respect of metals, not yet obtaining their ripeness and perfection, nor separated from the superfluous earth; for how should a bird be hatcht of an egg by an heat, not predestined for the generation of a bird? For so we must understand of minerals, which if they be deprived of their metallick nature, how should by fire metals be produced from thence? But thou saist that thou never sawest the production of perfect metals out of courser; therefore that it is neither likely, nor credible to thee, to whom many things as yet lye hid, as from most men, perversly and foolishly denying things unknown; for daily experience witnesseth, that the viler minerals and metals by taking away the superfluous sulphur (however it be done) obtain a greater degree of perfection, therefore should not thy heart believe, and thy tongue speak what thou seest with thine eyes? For experience shews that good gold and silver might be drawn out by art almost out of all course minerals and metals, yet more out of some than of others, and speedier; for there is not that dark night, that is altogether depriv'd of light, which may not be manifested by a hollow glass; nor is there an element (though never so pure) not mixt with other elements, nor any malignity depriv'd of all good, or on the contrary. And as it is possible to gather the hidden beams of the Sun in the aire, so also hidden perfect metals dispersed in imperfect metals, and minerals by fire, and an expert Artist: if once they are placed in fire with their proper solvents, where the homogeneous parts are gathered, and the heterogeneous separated; so that there is no need to go into the *Indies* to seek gold and silver in those new Islands, which is possible to find plentifully here in *Germany*, if so be the merciful God would please to

turn away those present cruel Plagues, and bring them out of old metals, *viz.* Lead, Iron, Tin, and Copper, there left by the Dealers in minerals; indeed without the culture of minerals. Let no man therefore judge himself to be poor, because he is only poor and in want (although otherwise very rich and abounding in wealth, which yet in a moment he is forc't to forsake) that being ungrateful, neither knoweth nor acknowledgeth God in his Works.

What I pray is in less esteem in the world, than old Iron and Lead, which are acceptable to the wise to use in the Lotion of Copper and Tin with the mineral White? But how they are to be washed, is a difficulty to the unexercised in the fire, and shall be delivered by similitudes: You see Antimony fresh digged out of the earth, very black and impure; which by fusion separated from its superfluity (which, though nature gave to it not in vain, but as an help to its purification, according to that: *GOD and Nature do nothing in vain*) is made more pure, and endowed with a body nearer to metals than its mineral, which if afterwards melted with salt of Tartar, the crude and combustible sulphur is mortified thereby, and is turned into dross, and separated from the pure mercurial part, so that hereby is made a new and fresh separation of the parts, of which one portion being white and brittle, sinks to the bottom, the other lighter, to wit, the combustible sulphur is on the top with the salt of Tartar; which poured out into a Cone, when they are cold, may be separated with the hammer; the inferior part of which is called by the Chymists *Regulus*, which is purer than Antimony cast the first time out of its mineral; and this is the usual purging of Antimony used by Chymists; to which (*Regulus*) if afterward any thing should be added, for a third purification, without doubt it

would not only be made purer but more fixt and malleable. For if white Regulus be preparable out of black Antimony, why not as well malleable metal out of the *Regulus*.

Another way of separating the superfluous Antimonial Sulphur,

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Antimony powdred one part, Salt-peter half as much, mingle them, and kindle the mixture with a live coal, and let that Antimonial sulphur, with the nitre be burnt up, the darkish mass being left, to wit, of a brown colour; which melted for the space of an hour in a strong fire yeilds an Antimony like to that which is made with salt of Tartar, but somewhat less in quantity: in like manner the parts of Antimony are separated, *viz.* if Antimony, Nitre, and crude Tartar be mingled in an equal weight, and being mixt are kindled and melted. There is also another separation of the Antimonial parts; when of small bits of Iron one part is pat into a strong crucible, in a wind Furnace, to which being red hot, cast two parts of ground Antimony, for fusion, and the superfluous combustible sulphur will forsake the Antimony, and joyn to the Iron, a metal more amicable to it; mixt with which, it forsaketh its own proper pure Mercury, and sulphur or *Regulus*, which is almost the half part of the Antimony.

And these four ways, by which the superfluous combustible sulphur of Antimony is separated are most common, not set down as secrets, but for demonstration sake, that it may appear how sulphureous minerals are, to be perfected and purified, which are little amended; yet shewing a better way not only for Antimony, but also for

Arsenick and Orpin, although these two cannot be so done with Iron, Nitre and Tartar, by reason of their volatility; but with Oyl, or other fat things in close crucibles, giving a *Regulus* like to the Antimonial; and these *Reguli* make Tin hard, to sound and be compact; if to one pound one ounce be added in fusion, for making good houshold stuff. And in tryal they give good Gold.

And as it is said of purging Antimony, so also it is to be understood of the rest, as *Wismuth*, *Zinck*; *Lapis calaminaris*, Lead, Tin, Iron and Copper, to be purged from their superfluous sulphur, if thou wilt draw more perfect metals, *viz.* Gold and Silver out of them with gain. And so I make an end of metallick lotions; recommending to Chymists, *Nitre*, *Tartar*, *Flints* and *Lead*; for who knoweth to use them, shall not lose his labour in Chymistry; but 'tis to be lamented, that every where good earth and fixt in the fire, is not to be gotten, retaining Lead and Salts; for without our old Saturn little or nothing can be done in refining metals; therefore who goes to try any thing in this Art, let him seek the best earth retaining Lead twentyfour hours space; afterward let him consult with Tin, what *Vulcan* has to be done with Iron; who will tell him what he must suffer, before he obtain the Crown.

Of the tincture of Sol and Antimony.

Sometimes an alteration happens to mans body, from the attraction of mineral vapors (which cannot be done by my Furnace) in the tryal; therefore here I will set down a certain medicine for the Workmans sake, as well for preserving as curing, namely, a clear rubin fixt, and soluble of Gold and Antimony. Take of pure Gold half an ounce, dissolve it in *Aqua Regia*;

precipitate the solution with liquor of Flints, as before is said in the Second part; edulcorate and dry the calx, and it will be prepared; take *Regulus Martis* (of which is spoken a little before) beaten fine, to which mix three parts of the purest Nitre; place the mixture in the crucible between burning coals, putting to fire by degrees: which done make a stronger, *viz.* for fusion; for then the Mass will be made purple; which taken forth and cooled grind very small, of which take three or four parts and mix with one part of the aforesaid golden calx; place it mixed in a strong crucible covered over in the aforesaid winde Furnace, and make the mass to flow together like metal, and it will assume the Antimonial Nitre in the fusion, and will dissolve the Gold or the calx of Gold, and a mass of an Amethyst colour will be made therewith, which so long leave in the fire, till it get the clearness of a Ruby, which one may try with a clean wire or iron bowed and put therein, although the mean time the mass deprived of fusibility, is thickened; it is meet to add some Nitre or Tartar, for speeding fusion, and that as often as shall be needful. Lastly, pour the mass, when it shall come to the utmost redness of a Ruby, hot into a clean copper morter, which there leave until it cool, and it will be in colour very like to an Oriential Ruby; then bruise it hot into powder, for taking air it would melt, and extract the tincture by the affusion of the spirit of Wine in a Vial, and the Gold together with the Antimony will remain very white like the finest Talc, to be washed with clear water, in a glass, edulcorated and dryed; which melted with a stronger fire, gives a Yellow glass, in which no Gold appears, yet separable by way of precipitation with the filings of Iron and Copper, from which it recovers its ancient colour, but without profit, by reason of the

wast, the tinged spirit is to be taken away from the tincture, which is a very soveraign medicine in many grievous diseases.

Although thou mayest suspect this not to be the simple tincture of *Sol*, but of Nitre and Tartar mixt, be sure that the quantity of Nitre added not to exceed; and suppose that tincture of Tartar and Nitre, I pray what waste is there? since that is so good a medicine by it self, & I am perswaded, this tincture of *sol* to be better than those set down in the Second part. That Ruby may be so used by it self with proper vehicles, seeing it is a soveraign medicine of it self; or else exposed to the air and resolved to a liquor; for the medicine is no less than a tincture, because the Gold in it, and the purer part of Antimony are made potable without corrosives. Wonderful is the power of salts in metals to be destroyed, perfected and changed by fusion; for it happened to me one time making this Ruby, placeing two other crucibles also with metals, by this containing gold with the prepared *Regulus* of Antimony (for easily two or three, or more crucibles may be placed in this furnace, to be ruled with one fire, which cannot be done in a common furnace by that means) about to put in a certain salt into the crucible next to the crucible of gold, that by a mistake I cast it into the crucible with gold only, whence so great a conflict arose, that there was danger of boyling over; therefore forced to remove it out of the furnace presently with tongs, and to effuse it, supposing that the Ruby was left by my rash putting in of salt; therefore I would only save the gold. And I found the effused mass red like blood, purer than a Ruby, but no Gold; but white grains like Lead dispersed here and there in the salts, by reason of their smalness, not separable but by the solution

of the salts, which being separated by the solution of water from the red tincture like blood, remained in the bottom of the glass, which afterward for fusions sake I placed in a new crucible in that furnace, but willing to try the fusion, I found the crucible empty, and all the Gold vanished, a little excepted sticking on the top to the crucible and the cover, which I took away and melted for experience sake in a new close crucible, but all of it presently feeling heat flew away like Arsnick, no sign being left in the crucible; and so I was deprived of my Gold.

At length I took the red solution, and abstracted the water from the salts, and I found the salt red like blood, which I put in a clean crucible in the furnace for to try whether any metallick body might thence be extracted; but I found the effused salt deprived of all tincture and redness, which seems strange to me even to this day, that by help of this salt the whole substance of gold, *viz.* the tincture together with the remainder flew away, having so great volatility.

Which labour afterward I would reiterate, but it happened not so at all as at the first time; there was indeed some alteration of the gold made, but its volatilization was not so great, the cause of which thing, I think was the ignorance of the weight of the aforesaid salt, cast in at the first time against my will.

And two reasons chiefly moved me to insert this history, First, that it may appear how soon one may mistake in a small thing frustrating the whole process. Secondly, That the truth of the Philosophers may appear writing that gold by art is reducible into a lower degree, equal to lead (which happened to me in this work) and that it is harder to destroy gold and make it like to an Imperfect metal, than to transmute

an imperfect metal into gold; therefore I am glad in my heart that I saw such an experiment; of which thing our phantastick Philosophers will hear nothing, writing whole volumes against the truth, stifly affirming, gold to be incorruptible, which is an arrant lye; for I can shew the contrary (if need be) many ways. I wonder indeed what moves such men to slight a thing unknown, I do not use to judg things unknown to me.

How dare they deny the transmutation of metals, knowing not how to use coals and tongs? truly I confess those rude and circumforaneous Mountebanks, not a little to defile and disgrace true Chymistry, every where cheating men by their fraud, being needy and opprest with penury; unless peradventure they find some credulous rich man giving them food and raiment for the conceived hope of Gain and Skill, of which also some being furnisht with gold, go clad like painted Parrots, whom I judg to be hated worse than a Dog or a Snake; but innocent Chymistry is not therefore to be despised. Some covetous men besotted with folly and madness, laying out their moneys with an uncertain hope of gain, who afterward the thing ill succeeding, are forced to live in poverty, whose case is not to be pityed, destroying their money out of covetousness. Some seek wealth not out of covetousness, but rather that they may have wherewith to live, and may search nature, which are to be excused if they are deceived by knaves, yet not to be praised if they spend above their ability.

Another tincture and medicine of Gold.

Dissolve gold in *Aqua Regia*, being dissolved, precipitate it with liquor of the salt of flints, pour

some more of the aforesaid liquor to the precipitated gold, then place them in sand to boyl for some hours space, and the liquor of flints will extract the tincture of the gold, and be dyed with a purple colour, to which, pour rain water, and make it to boyl together with that purple liquor, and the flint will be precipitated, the tincture of an excellent colour with the salt of Tartar left; from which it is necessary to extract the water even to driness, and a very fine salt of a purple colour will remain in the bottom of the glass, out of which with the spirit of wine, may be drawn a tincture as red as blood, little inferior in vertue to potable gold; for many things lie hid in the purple salt, of which more things might be spoken if occasion permitted; therefore let it suffice to shew the way of destroying gold, for that golden salt may in a very short time, *viz.* an hour, be perfected with small labour and transmuted into a wonder of nature; confuting the slanders of the noble Art of Alchimy; for which gift we ought to give immortal thanks to the immortal God.

Of Looking-glasses.

I have made mention in the treatise of *Aurum potabile*, not only of the material heat of fire, but also of turning the finest beams of the Sun into a material bodily substance, by help of certain instruments by which they are collected. I have also mentioned there a concave Glass, whose preparation I will here give, it being not known to all men, the best that I know is as followeth. First, patterns are to be made of the best matter, namely, hair and Potters clay, of which thing in the Fifth part, conformable to the glasses, in form and figure circularly round; for else they cannot gather the Sun-beams together, and again put them forth; the fault of which thing is to be

ascribed only to the pattern or mold; for the fusion and polishing of glasses is no singular Art, being known even to Bell-founders, but to melt them when very well shap't of the best matter and rightly to polish them, this is Art: and first to cut the patterns round, being very well shaped by the use of a sharp Iron Instrument cannot briefly be demonstrated; therefore I will send the Reader to Authors prolixly handling this thing, *viz. Archimedes* and *Johan. Baptist. Porta*, and others; but if thou wantest those Authors, or dost not understand them, see thou have a Globe exactly turned for making the Molds as followeth: first make a mixture of meal and sifted ashes, which spread equally between two boards, as the manner is to spread past made of Flower and Butter for Pyes and Tarts, answering in thickness to the glass to be shaped, then with a Compass make a circle as big a you please, which cut with a knife, and put it on the Globe, and sprinkle quick lime on it out of a searce or sive, and put clay well prepared with haire over it of the thickness of two fingers breadth; and if it be a great piece you must impose cross wires strengthning the Mold, least it be bent or broken. Afterward one part being hardned with the heat of the Sun or fire, take away all that from the Globe, and put it on some hollow thing, on which it may on all sides stand well, and also sprinkle quick lime or the powder of coals on the other side, and put upon this the other part of the pattern, and again expose it by degrees, to be dryed by the heat of Sun or fire, lest it crack; which done, take away the ends making those parts of the Mold or pattern from the inward or middle, which ends set one against another to the inward parts, the distance at least of a hands breadth, and put between in the top a few live coals to harden the Mold all over; to which put on

other coals, and then more, and so by degrees even to the top, that they may be well kindled in their lighter parts; but if the Molds are very thick, one fire will not suffice, but it will be necessary to add more coals, until they be throughly kindled in the inner parts; afterward, let the fire go out by degrees, that the types may grow cold, but not altogether, but so that you may touch them; and presently besmear finely the sifted ashes mixt with water, with a pencil, to stop up the chincks arisen from the burning the hair, and for smoothing the types; then again make both parts (after thou hast first framed a hole in them for a Tunnel) clean, being wary lest any foul thing fall upon them; and carefully bind them together with iron or copper wier; and very well lute over the joining with clay prepared with hair; and put on an earthen Tunnel, and place the Mold in dry sand up to the top: And thou oughtest in the mean while thou burnest and preparest the Mold, to melt the metallick mixture, that it may be poured into the hot Mold, the Metal being well melted, cast in a bit of searcloath, which burning, pour out the melted Metal into the hot Mold, being wary lest coals or some other thing fall into the crucible, and be poured with the Metal into the Mold, spoiling the glass; then let the glass cool of it self in the Mold, if the matter do not moulder in the cooling: And if it should moulder in the cooling, which indeed would lessen it, it behoves that the cast glass be presently taken out of the Mold, and covered over with a hot earthen or iron vessel, that it may cool under it, which otherwise, cooling shut up in the Mold not being able to moulder, is broke in pieces, but a little below you shall perceive, what be those mouldering metals.

And this is the common way (and the best) of melting, if so be thou art exercised; there are also

other ways; first, when molds are made of wood or lead, agreeing to the glass, to be impressed with sand, or the finest powder of tyles or other earth, as is the custome of copper-smiths; and this way only serveth for lesser glasses.

The third way which is the best of all, but hardest to one not exercised, is as follows; make a waxen Mold with a Cylinder to be placed between two boards, as is aforesaid of the first way, which put upon the globe for to shape it, and let it be hardned in the cold; then take it away, and spread over it the following mixture with a pencil; which see that it be dryed in the shadow, then apply potters clay, prepared with hair, the thickness of one or two fingers breadth; then take away the wax in manner following from the earth: make a round hole in the earthen mold with a knife, coming even to the wax; which done, place it near a coal fire, the mold being bending down, and the melted wax will run through the hole, into which pour the hot (not burnt) metal, *&c.* that liniment which is anoynted on the wax must be very well prepared least while the wax melt, it fall and melt away with the wax, nor let the wax pierce the earthen mold and spoil it. Now the liniment follows: Burn potters clay well washt in a Furnace even to redness; afterward grind it and take away its finest part with washing of water, so that you may have an impalpable powder, which dry, and again burn with a strong fire: after grind it with rain water and salt Armoniack sublimed, upon a stone, as Painters use to prepare their colours, bring it to the just consistence of a paint, and the mixture will be made; the salt Armoniack keeps that fine powder, lest it melt away with the wax: and the prepared earth makes a tender and fine fusion.

The metallick mixture for the matter of the Looking-Glass.

There are divers of these mixtures, of which one is alwaies better than the other, which by how much 'tis the harder, by so much the glass is the better; and by how much the harder the metal is, by so much the better it is polisht; nor doth the hardness of the mixture suffice, but its whiteness is also required: for red proceeds from too much copper; black from too much iron, or duskie from too much tin, and doth not make the true representations of things, but changeth the shape and colour of them: for example sake, too much copper rendereth the Species redder than they are to be, and so of the rest; let therefore the metallick mixture be very white; but if burning glasses are to be made, it is no matter what colour it be of, if so be that the mixture be hard. I will set down one of the best, ℞. of Copper plates the thinest beaten to pieces one part, of white Arsnick a quarter part; first moisten the plates with the liquor of the salt of Tartar, and make a Stratum super Stratum, with plates and Arsnick powdred, by sprinkling this on them, until the crucible be filled; to which pour the oyl of Linseed, as much as sufficeth to cover the copper and Arsnick; which done put on the cover with the best lute, then place the crucible (the lute being dryed) in sand, so that only the upper part of the cover may stick out and administer fire by degrees, at first little; secondly somewhat stronger, till at length it be hot, that all the oyl may evaporate; in the mean time, the oyl will prepare the copper, and retain the Arsnick, and will make it enter into the plates, like oyl piercing dry Leather: Or place the crucible upon a grate and put Fire to it, which administer by degrees, until the oyl evaporate in the boyling. Lastly, when it shall coole, break the

crucible, and thou shalt find the copper of diverse colours, especially if thou shalt take Orpin in stead of Arsenick, and twice or thrice increased in magnitude, and brittle.

R. of this copper one part, and of latton [*Orichalcum*] two parts, melt it with a very quick Fire, and first indeed the latton, to which afterward add the friable copper; pour out the mixture melted and thou shalt have a very hard metal unfileable, yet not so brittle, but like steel, of which diverse things may be formed serving in stead of iron and steel instruments; take of this hard metal three parts of the best tin without lead one part, melt and effuse it, and the matter of looking-glasses will be made. This mixture is a hard white metal making the best looking glasses, but if this labor seem tedious, take of copper three parts, of tin one part, of white Arsenick half a part for the matter of looking-glasses, which are fine but brittle, as well in the melting as polishing, therefore carefully to be handled. I must here set down a thing worthy to be observed, and known to few; *viz.*: a false opinion of many, especially of those who attribute knowledge to themselves of the proprieties of metals. In the second part (of subtile spirits) mention is made of the pores of metals, for experience witnesseth, that those subtile spirits as of harts-horn, tartar, soot, and sometimes those sulphureous ones of salts and metals do evaporate through pewter vessels, which at the first hearing every man cannot conceive, for whose sake this discourse is made. Make two balls of Copper, and two of pure Tin not mixt with lead, of one and the same form and quantity, the weight of which balls observe exactly, which done, again melt the aforesaid balls or bullets into one, and first the copper, to which melted add the Tin, lest much Tin

evaporate in the melting; & presently pour out the mixture melted into the mold of the first balls, and there will not come forth four nor scarce three balls, the weight of the four balls being reserved; if then metals are not porous, whence I pray doth that great alteration of quantity proceed? therefore know that metals are porous more or less; gold hath the fewest pores, silver hath more, Mercury more than that, Lead more than Mercury, Copper more than Lead, and Iron than copper, but tin hath most of all.

If we could destroy metals, and again educe them destroyed from power to act, surely they would not be so porous. And as a child without correction is unapt to any goodness, but corrected is endued with all kind of vertue and learning, so also we must understand of metals which left in their natural state, namely drawn out of the earth without correction and emendation remain volatile, but corrupted and regenerated are made more noble, even as our bodies destroyed and corrupted, at length shall arise clarified before they come into Gods sight. Well said *Paracelsus*, that if in one hour metals were destroyed an hundred times, yet they could not be without a body, reassuming a new species and indeed a better, for it is rightly said, *Unius corruptio, alterius generatio*; for the mortification of a superfluous sulphureous body is the regeneration of the Mercurial soul, for without a destruction of metals perfection cannot be; therefore metals are to be destroyed and made formless, that thereby the superfluous earthy combustible sulphur being separated, the pure fine Mercurial species may spring forth. Of which thing more, when we Speak of Artificial stones.

Of the smoothing and polishing of looking-glasses

A looking-glass, though it be very exactly melted and proportioned, yet is of no value if not rightly polished and smoothed; for easily in the smoothing any part it may suffer some dammage hurtful to it, and it is necessary to take from them first, the grosser part by the wheel, as the custom is with Pewterers and Copper-smiths with a sandy stone, then to apply to them a finer stone with water, until they are sufficiently smoothed by grinding; which done, the looking glasses are again to be taken from the wheel and to be moved to the small wooden wheel covered with leather, rubbed over with a fine prepared glazing stone until the crevises contracted in the turning no more appear, having got a cross line, afterward another small wheel covered with leather is required, to which a bloodstone prepared and washt with the ashes of tin rubbed on, to which likewise by the aforesaid means, according to the same line, the looking-glasses are so long to be moved till they get a sufficient fineness and brightness. You must keep such looking-glasses from the moist air, and breathing, and to wipe them when infected with air and breathing not with any woolen or linnen cloth, but with a Goats or Harts skin, and not any way, but according to the cross line, with which the looking-glasses are smoothed. They may also be smoothed by lead artificially melted, by first rubing them with a smiris and water, and then with a finer smiris and lead; lastly with a blood stone and ashes of tin: likewise also with whetstones, by changing for a finer every time, whence at length also they acquire a splendour by the ashes of tin.

Also the outward part of the looking-glasses (convex) may be smoothed, which represents the species short, and spreads the dispersed rays: but the inward part (hollow) gathers and multiplies, and

puts forth or exposeth the Image.

Let these things suffice concerning the melting of looking glasses, & polishing requisites, for the collection of the Sun beams, and although from the aforesaid mixture other kinds of looking-glasses might be made representing wonderful shapes and several excellent things, as Cylindrick, Pyramidal, Parabolick, *&c.* they are omitted as impertinent to this place, yet I could shew a way to make them, because I have undergone no small labors and charges in the searching of their preparation and use, if it were necessary. But of all looking-glasses that is most useful whose preparation we have shewn, whose diameter is at least two or three spans, if thou wilt perform any special thing; although it be but of one or two spans, yet it gathers abundance of beams, so that thou maist melt tin and lead with it, if it be well shaped: yet the larger are the better. Nor ought they to be too deep, that they may cast their beams the further, and better perform their actions or functions, let them have the twentyeth or thirtyeth part of the sphere (the section being exactly observed) which is the foundation of the Art.

Of Artificial Gems, and Metallick Glasses.

As for metallick glasses pertaining to Alchymy, and much conducing to the perfection of metals, and esteemed by the Ancient Philosophers, I would not omit to say somewhat in this place, because they are easily made by this furnace.

And indeed the Ancients have found these glasses questionless by chance, in reducing the calcined bodys into glass by a strong fire, for very many secrets by this means not sought for are found out.

Oftentimes it happens to our labors, that past hope we find somthing better or worse, than the thing sought; and I think it hath thus happened with these glasses, but however it be, I am sure these glasses have stood us in much stead; for *Izaak Holland* saith plainly, That vitrified metals being again brought to metals, by that reduction do give better and nobler metals than the first vitrified; and indeed gold gives a tincture, but silver gold, and copper silver; and so consequently the glass of other metals give better metals in reduction, the truth of which experience proves, and although I have not yet made great tryal in this work, yet I know that metals brought into dead ashes to be turned into clear glass cannot be again reduced into metals without great profit: yet one metal is more pliable than another, nor are our glasses the Artificial stones of gold-smiths fixed to other large ones for ornaments sake, made by the addition of glass made of fusile sand; but ours are made of the juice of metals. But I do not deny the vertue of Venice glass, and others in the mundifying of metals, chiefly copper and tin, which yet is not comparable with metallick juices. I freely confess I have tryed this thing twenty times, and I never was deceived by it: but I know not whether it may prove so in a greater quantity, because I never tryed it, doubting of my vessels not fit to retain fusible glasses a requisit time: for I have spent much labor in making these kind of vessels, but hitherto in vain. For there is very great hope of gain, if thou hast very strong crucibles, nor is this perfection of metals without reason, for whilest the metal is burnt to ashes, much of the superfluous combustible sulphur is burnt (as you may see in Lead, Tin, and Copper, from the sparks appearing in their calcination whilest they are stirred and separating) which if

again reduced (*viz.* being calcined) its better and heavier part (by benefit of melting) sinketh to the bottom, the worser flowing on the top is changed into dross or glass. And so the separation of metals is made by the help of the Fire alone, to the ignorant and unexpert incredible: but consider gilt silver to be separated in fusion, which is as it were corrupted by the common sulphur, and the metallick species, being lost, it turns to a black dross before that in melting it forsakes the gold: which way also silver is separated from copper, and this from iron. Observe also that black and crude Antimony, being reduced into ashes by calcination, and melted is separated by a strong Fire, the purer parts descending pure and white like silver, but the impure parts ascending are changed into glass or dross, which separation would never be made without incineration although the Antimony should have stood long influx.

Thou seest therefore the power of Fire alone in melting metals, wherefore believe thou that thy labor shall not be in vain if thou knowest how to help the Fire. Exercise thy self therefore in it, for thou art sufficiently instructed, and this furnace will help thee; without which it is impossible to manage such things well, as experience testifies, confirming my words.

Mention being made of metallick glasses, which belongs to the perfection of metals, I am forced to say somthing also of other *Amausa*, or coloured glasses, which are called Gems, and are worn for beautifying, which though it be not profitable, yet it is a delightful labour, which knowledge, as well noble as ignoble have long sought, not for gain, but recreation sake, erring from the true way (although prolixly described in many tongues) through

ignorance of the art to render crystal or flint fusible, and colouring it, being content with lead glasses made of one part of crystals, or flints, and three or four parts of minium or ceruse, glass of no worth, as not only very soft and unapt for polishing, but also heavier than it ought by means of the lead, and having a yellow or green colour, for every glass made of crystal or flint, and minium or ceruse by themselves, *viz.* without the addition of other colours, gets a yellow colour from the Lead, hindering and altering other mixt colours; therefore a good stone is not made this way of lead and flint, but Leaden glasses of this sort, Venice glass, Ashes of tin, and colours being added to them, be used diversly of the goldsmiths, namely to colour gold, otherwise of no moment.

Therefore I will give another preparation, namely out of flints *&c.* crystals alone without minium and ceruse, with metallick colours, having the colour and elegancy of excellent stones; but not harder than glass; for although crystal is harder than iron, yet by melting it is deprived of its hardness in some measure, and is made like to glass, yet so much hardness reserved, as serves to write on another glass, which glasses are easily polished, and in all things and by all, most like, hardness excepted, to natural stones; with which not only various kinds of stones may be made, and other gold, silver, and wooden works or pictures adorned; but also diverse supellectils, as salts, hafts or hilts, cups, *&c.* and also images and antiquities may be formed (by fusion) like to those cut out of gems by the hand of an ingenious workman, most delightful.

They are made after this manner: first you must look for flints and crystals not coloured, but very

white, gathered out of sand or streams, which you must heat in a covered crucible, and quench them glowing hot in cold water, that they may crack and may be pulverised; otherwise they are so hard that when they are powdred, they take part of the morter and so are defiled; therefore it is worth your labor to handle them well. Afterward ℞ of flints prepared, and the purest salt of Tartar, made in glased vessels, but not in copper or iron, equal parts, mingle them and keep them for use.

And if thou wilt make this mass into a gem, you must first mingle some colour (what you desire) afterward so long place it (being put into a clean covered crucible scarce half full) in a very strong fire, till all the salt of Tartar hath evaporated, and the flint together with the colour come into substance fusible like glass: you must then put a small clean iron wier, and draw out a little of the melted mass for tryal; whether it have stood long enough in the fire, whether there be yet pustles and little sands, or whether it being exactly melted, it shall descend to the bottom, which done, you must take off the crucible, and place it under some hot iron or earthen vessel, that it may wax cold with the melted stone; otherwise the mass will be broken in the crucible into very small parts, and would be unfit for greater works: neither must you pour out the melted mass for fear of the attraction of aire, and pustles to arise thence. But being willing to make out of the Mass by Fusion, not Engraving Money or Images; there is no need to leave the mass in the crucible to cool, but presently to pour it out hot in a copper morter, and nothing will stick to the crucible, but all the mass will be poured out without any waste: And this mass, if thou wilt, thou maist powder or break into very small bits for fusion and

impression. But the mass when cooled in the crucible, is to be taken by breaking the crucible, and to be reduced into greater or lesser stones by cutting: but melting for money or images; you must place the money or image, which you will imitate, with the backside or hinder-part downward in an iron Ring, a Fingers breadth broad of greater capacity than the money, upon a stone or plain wood, and sprinkle on a little Tripoly, or fine Sand, through a cloth, namely, as much as sufficeth to cover the mold, and upon this to put more, well moistened with water, like ashes of cupels, and to press it, being most tenacious, firmly to the mold, but warily, lest the mold be moved; which done, you must turn the ring, and with a knife lift up the mold, and to take it, being lifted up with ones hands or tongs, the image being left in the sand, to be dryed by heat of the Sun or Fire. Afterward to cast the image, place the ring with the image impressed in the sand under a tile, and administer a strong fire, that the whole ring, with the sand, and the image in the sand may be very hot: then take off the ring, to see if the image have suffered any loss; which, if it have not, you must put upon it so much of the aforesaid glass, coursly beaten, as sufficeth in the fusion to fill the image impressed on the sand; which done, put the ring again under the tile, and administer a fire of fusion, till the glass melt in the ring; to which, touch with a smooth iron and light, (with a handle) being hot the ring being taken first out of the furnace with tongs, pressing the glass well to the mold; and then place it under a hot iron, or earthen vessel to cool; and being cold, take the image from the mold, which answers to it in all things, if thou hast aright proceeded, exactly representing the Carvers art, or a seal impressed on a jewel, which excellent work is

most fit to feign, and represent Antiquities and Rarities.

The colouring of the aforesaid mass follows, by which it is made most like to Gems.

It behooveth that colours be taken from metals and minerals, namely from Copper, Iron, Gold, Silver, Wismuth, Magnesia and Granate; of other colours I know nothing of certainty, Copper commonly makes a colour green like the Sea, Copper with Iron, grass-green; Granate a smaragdine colour, Iron yellow or jacynth; Gold the best skie colour; Wismuth common skie colour; Magnesia Amethystine, mixt, they give other colours; E. gr. Gold mixt with Silver gives an Amethyst colour; Iron and Copper, a pale green; Wismuth and Magnesia, a purple; Silver and Magnesia, various colours like an Opal.

Images are also made of divers colours, if the masses of diverse colours be broken into bits and mixt, be put upon the Mold, *&c.* And if thou desirest an opac mass (green, red, skie colour, *&c.*) add a little calx of Tin darkning, on which as on a Basis the colours insist. For example; in making a Turcoise stone or a Lazulus, mingle with the Azure made of the silver Marcasit or Zafora (to colour the mass) the calx of Tin, that they may melt together, and before the impression be made, put upon the Mold some prepared gold, then spread and put upon this the aforesaid glass; and the fusion and impression being made, will be made thence a stone having golden veins like *lapis Lazulus* very delightful; But there must be a *calx* of Gold not losing its splendor in the fire, such as is made by Mercury, or that which is better, which is precipitated out of *Aqua Regia*: of which above.

Of the preparation of the colours for colouring the mass of Flints and Crystals.

The plates of copper often heated, are to be quenched in cold water of which more in the Fifth part, from three to six grains of it may be mixed with ʒ j. of the mass for a Sea-green colour. Iron is reduced into crocus by reverberation; of which from four to ten grains are added to the mass for a yellow or Jacynth colour; Silver is dissolved in *Aqua fortis*, and precipitated with the liquor of Flints after it is edulcorated and dryed, whereof from one to six grains, added to ʒ j. of the mass, they make mixt colours.

Gold is dissolved in *Aqua Regia*, edulcorated and dryed, precipitated first with liquor of Flints, whereof from grain four to Ə *ss.* mixt with one ounce of the mass, make a most elegant Saphire. And if from three to six of that soluble ruby made of the Gold, and the nitrous *Regulus Martis* be added to ʒ j. of the mass, they make a very polite ruby: Magnesia pulverised, whereof, from six to fourteen grains, to ʒ j. of the mass, make an Amethyst.

Marcasit dissolved in *Aqua Regia*, precipitated with the liquor of flints, edulcorated and dryed, whereof from one to five grains, to ʒ j. of the mass, give a Saphire, but not comparably so polite as one made with gold.

But being unwilling to calcine Marcasite, let him take Zafora, and mingle to ʒ j. from five to ten grains; Granates of *Bohemia*, or Oriental pulverised, add from six grains to Ə j. to ʒ j. of the mass, for little green stones like to the natural smaragd or emrald: other things which remain of the mixture of the colours, are to be learned by experience.

To what uses coloured flints and crystals are appointed, is not here to be treated of; one use excepted, which I set down for the eyes, which are weakened by too much watching, the heat of fire and smoak; see thou have a waxen mold circularly round, of the bigness of a dish or trencher; (the Optiques are wont to call such *lentes*) to which, put the best clay well mixed with hair: anoint the waxen type with oyl, and exactly apply the best prepared earth of crucibles (and durable in the fire) the thickness of a finger; which being dryed, perforate in some part, that the wax being melted by the fire, may flow forth: afterward burn the mold in an earthen furnace; being burnt, fill it with prepared glass, and place it in a wind furnace till the glass melt; which at length being cooled, take off the type by attrition, and there shalt thou have the crystal resembling the form of the type; which afterward thou must make and polish like spectacles in an iron dish on both sides; and take it out with a strong iron wier, and thou shalt have a good crystalline *lent* for a small price, which otherwise is scarce made of crystal of so great a bigness. And if thou wilt, thou maist colour the glass green, very pleasant to the sight, and fit a foot to it for greater benefit. And the glass doth not only serve for the Multiplication of light in the night time, that you may see a thing a far off in a chamber, but also for the fixing and calcining minerals by the Sun-beams, and melting of Metals, and multiplying of Pictures, like an hollow glass, and also for other uses it may be compared with an hollow looking-glass, which doth the same of an equal bigness with the hollow glass; nor is there any other difference of them but reflexion. This glass-instrument is made likewise another way, and by less cost and labor, if it be of a polisht looking-glass, if two great orbes are

cut out with a diamond, and if they are somewhat softned with Fire, and are left there so long in the heat, until they shall stick like wax very close to the stone, which done, let them be cooled again, which afterward taken out, will represent the form of an hollow glass; to which, it behoves to fix a leaf on the convex part. And the glasses do the same that an hollow metallick looking-glass doth, the reflexion excepted, which is not so strong as of the hollow glass: And although the glasses are sooner broke, yet they are very fit for the making of the following Instrument.

And they are bound together with a strong wier, applyed across on the concave part, and an hole is cut in the brim with a diamond on one side, of the bigness of a pea, then the crevises are exactly closed in every place with the best lute; which done, a silver or copper ring is to be tyed about it, holding those glasses straightly, so that the Instrument may be fitted to the foot, all which well done, those strong wiers are separated or cut off, with which the glasses were bound at first, namely, near the copper ring: afterward very pure *Aqua vitæ* is to be put in through a funnel, as much as is required for the filling it up; the Instrument being filled, the hole is shut up, which is to be kept for use; and this Instrument is better than the hollow glass; especially, if it have in its diameter the breadth of one foot, and may be applyed to prospective pictures, it doth excellently represent and multiply them.

Behind which, if you place a candle in the night, it gives so much light in the Chamber, that you would think it came from the Sun. It doth also many other things which are here omitted as superfluous. And you may gather the dispersed light in the aire in the

night time with it, so that you may read the smallest writing. Such and others of the like things may be done by this furnace, all which to set down, would swell the Book too much. Other things of the metals examination and purification by fusion, in another place.

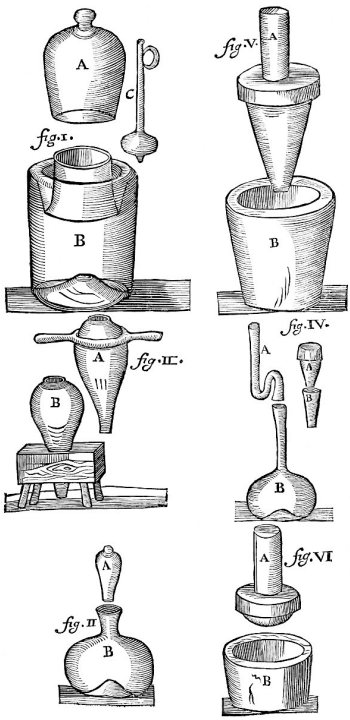
Take this, Reader, which is given to thee, in good part, at another time thou shalt have better; and do not mistake my writings, as if I did reprove the examinations of metals by the Ancients, fusions and separations, who only would communicate my opinion, and yield my assistance for further proceeding; for I know that dealers in metals giving too much credit to their small proof when they find nothing, do, contemn oars as barren, often abounding with gold and silver; when nevertheless, *John Mathes.* says expresly in his *Sarepta*, that minerals oftentimes tryed in a small quantity do yield no gold and silver, which in a great quantity, yield a great deal, wherefore credit it is not always to be given to such tryals, often deceiving, as experience testifies.

And this not only in those minerals which are digged out of the earth; but also in those clayie and sandy minerals, abounding with silver and golden flames; out of which neither by the less nor greater proofs, nor ablution nor Mercury is drawn with gain that thin and fiery dispersed gold: which by some waters is done without fire easily; for I know such mines are found neer many rivers of Germany, and many places in other Nations of Europe, out of which honest gain without much cost and labor may easily be gotten. Neither are they dreams, which I have spoken parabolically of the perfection of metals, for it is possible by art to help nature in the perfecting

things. There is therefore no more need of any thing than of knowledge; therefore the nature of metals being known, and their properties, they are easily separated, purged and perfected.

But what I have written of the universal medicine, I have done for the aforesaid causes, which have made me believe the thing, not as professor of the Art. The other things of coloured red glasses and looking glasses I have added, because they are easily prepared by this furnace, as sometimes necessary in some works. Other things of the handling metals are not without cause now omitted, which happily may be sometime delivered in another place, wherefore now we end.

FINIS.



THE FIFTH PART OF Philosophical Furnaces:

In which is treated of the wonderful Nature of the Fifth Furnace: Also, of the easy Preparation of the Instruments and Materials belonging to the foresaid Four Furnaces. Most profitable for Chymical Physitians.

Of the Preparation of the Furnace.

As concerning this, of which, though I made no mention in the Preface; for it was not my Resolution to mention it in the last Part, because I was purposed only to treat of the Instruments, as well earthen, as those of glass, and also of the other necessary things belonging to those four parts premised; yet I am willing now in this Part, (which I have judged to be the most convenient place for it, for which I did before design another) to discover the wonderful

Nature thereof, as far as I may for the Studious Artist's sake. And although I know that more in this part, than in all my other writings, especially the ignorant and unskilful, will be offended; yet I will not therefore pass it by, perswading my self, that by this means I shall do a work, that will be most acceptable to the searchers of Art, and Nature. For I do devoutly affirm, That this is the choicest of all my secrets that I confide in, in which I have already seen wonderful things, hoping that the Divine Benediction will some time or other be obtained upon the practice thereof. And as for the structure of it, much cannot be said thereof, because it is not built as other Furnaces are, but it is every where found extructed by Nature, being ordained for no other works, than those of Nature, *viz.* for the making of any *menstruum* that shall dissolve gold, silver, and all other metals, and minerals without any noise, as also pretious, and common stones, and also glasses: the original of which, is the original of the *Menstruum*. Now what, and what manner of Furnace that is, that produceth this Royal *Menstruum*, (coming from the *Menstruum* it self) and that easily without any labour, you may easily conjecture, that it is not any common one, by the help whereof other things are distilled, that can yield such a *Menstruum* that is not corrosive: which certainly is not any common *Menstruum*, because there is but this one *Menstruum* that I know, which doth not partake of any corrosive quality, that doth more than any, or all other corrosive waters whatsoever. For all corrosives whatsoever they are, as *aqua fortis*, *aqua regia*, spirit of salt, vitrioll, allome, and nitre cannot together, and at once dissolve the close union of gold, and silver, and other most hard subjects, that cannot be dissolved in waters, though never so caustick.

This indeed is wonderful, and stupendous, that a thing every where found most vile and base, should doe so great a miracle: I know not what moved me to write of it, knowing that I shall in this part offend not onely the wise by writing so openly, but also the ignorant detractors, and slanderers that will accuse me of falsity. And truly these considerations might justly have deterred me, but that I knew I might doe a good work, recalling many from their errors: For many are perswaded that there is no other dissolving *Menstruum*, besides the aforesaid corrosive spirits; but those are Chymists that are ignorant of Nature; yet the Philosophers with one consent say, that those corrosive destructive spirits make a fruitless solution of metals; for experience testifies, that the solutions made by the help of *aqua fortis*, and *regia*, and other spirits, colour the hands, being that which a true Philosophical solution doth not, and furthermore, testifies, that those, *viz.* which colour the hands, are not to be reckon'd among the true Philosophical solutions, but to be contemned as Malignant. Wherefore I was willing to write these things to instruct those that erre. Let no man therefore perswade himself, that a *Menstruum* so vile and contemptible, is of less efficacy, than those corrosive spirits. I my self did once scarce believe, that so great Vertues could be in so most vile a *Menstruum*, until I had experience of the truth in good earnest.

I could here add more things concerning the original of the universal *Menstruum*, which is so contemptible, which doth by its wonderful powers and vertues dissolve all metals, minerals and stones radically without any noise, unites and fixeth them; the solution whereof doth not colour the hand; the conjunction is inseparable, and the fixation incombustible; I say, I could add more things

concerning it, but that divers inconveniences, which by this means I might incur, as also the envy and hatred of others do deter me. For although any one doth think to discover the possibility of Art, and Nature; yet few would be content therewith, being very desirous of all manner of revelation; and if we should not gratify them, we should forthwith incur their hatred and envy, who would without doubt judge otherwise of the matter, if they had but any experience of our labours. Be thou therefore (courteous Reader) contented with this discourse, that shews thee the possibility of Art and Nature; and diligently seek after it in the fear of God, and without doubt thy labour shall not be in vain.

Of the Building of the Furnaces.

How those Furnaces of the first and second part are to be built and made of Potters Clay, and Stones; I need not say much, because there be many Books extant, treating of this matter sufficiently; yet this caution is to be observed in building of the Furnaces, *viz.* that those Furnaces, in which a very strong fire is not kindled, need not so strong walls, as those in which we distil, sublime, and melt, with a most strong fire. And for what belongs to subliming and distilling Furnaces; you may erect them of those common bricks which are made of the best clay, and well burnt, compassing them about with very strong walls, that they may the longer retain the heat: or else you will continually have something to do in mending them, and closing their chinks, which hinder the regiment of fire. Wherefore they must be compassed about with iron hoops, that they may be durable and not gape. Now what concerns the melting Furnaces, the aforesaid bricks are not of use in the building of them, because they not being

durable melt in the fire; wherefore you must make other bricks of a very good earth that is fixed in the Fire, such as is that of crucibles, *&c.* of which, afterwards; which are to be made in a brazen or wooden mould, and to be burnt, and it matters not whether they be round or square, a regard being had of the Furnace, that six or eight of them make one course, or row. But you need not build the whole Furnace of those stones, for it is sufficient, if the place only, where the coals still lye, be made of them, and the other part of the Furnace be made of common bricks.

A Lute for the erecting of Furnaces.

Lute may be made divers wayes for this business; for men prepare their Lute several wayes as they please. Some mix with sifted Potters earth, the beaten hairs of Cows, Oxen, Harts, or the chaffe of Barley, Tow, Flocks, Horse dung, and the like, that hold together the clay, and prevent chops, to which they add sometimes sifted sand, if the clay be too fat, beating the mixture together with water, and bringing it to a just consistence. And this is the best mixture, that is not subject to cleaving, yet weak, because in length of time the hair and chaffe are burnt, wherefore the Furnace becomes thin and weak. Many leave out combustible things, and mix Potters clay, and sand together, and temper them with brine, for the making of their Furnaces. And this is the best mixture, because it is not combustible as the other is, neither is it subject to cracking, by reason of the salt: and for this purpose, the brine of fish and salt flesh doth serve, and is very good, because the blood helps the joining of them together: but if the *Caput mortuum* of vitriol or *Aqua fortis*, being mollifyed, be mixed with Potters clay and sand, you go a better

way to work: for this Lute is not at all subject to cracking, but fixed in the fire and permanent. With this Lute are Retorts, and Gourds very well luted, and coated, also the joints of Retorts, and Receivers closed: this being mollifyed with a wet cloth applyed to it, may again be separated, and taken off, as that also with which salt is mixed: but the other Lutes that want salt will not be separated, by reason whereof glasses oftentimes are broken. Wherefore in defect of the *Caput mortuum* of Vitriol, temper the clay and sand with brine: But many mix the filings of iron, powdered glass, flints, *&c.* but you need not them for the building of the Furnaces, but only for the coating of certain glasses used for separation, and distillation, because the filings of iron being helped with salt, binds, and joins together most strongly.

Of the closing of the Joints, hindering the evaporation of subtle Spirits.

The aforesaid Lute is sufficient for the closing of the Joints of the first Furnace, where air is not kept from the Spirits, but not of the Vessels of the second Furnace, where most subtle Spirits are distilled, which it cannot retain, penetrating the same with the loss of the better part: wherefore you must make choice of another; unless upon the other being well dryed, a mixture made of quick Lime, most subtilly powdered, and Linseed-oyl, besmeared over with a pencil, which the porous clay attracting to it, is fortifyed, so as to be able to retain those most subtle Spirits: but this Lute can hardly be separated again; because refusing water, it cannot be mollifyed; wherefore the clay is to be tempered only with the white of eggs, and to be applyed with linnen clouts: but you must prevent the burning of the linnen, by reason of the extream heat of the neck of the

Receiver, by putting between an iron or strong glass, *viz.* betwixt the receiver and the retort. The joints also may be closed with oxe bladders wet in the white of eggs, also with starch tempered with water, if it be sometimes applyed, being smeared on paper. For by this means those most subtile spirits are easily retained, but not corrosive, for which use the *caput mortum* of *aqua fortis* is more convenient which after it is dryed must be smeared over with a mixture made of linseed oyl, and quick lime.

And divers kinds of these lutes are had being destined to divers uses.

Another Lute for broken Glasses.

It happens sometimes that glass vessels, as receivers, and retorts, have some cracks, but otherwise are whole and sound; which are greater in those glasses that do again suffer the heat of the Fire, wherefore at last the glasses are broken, which if you will prevent, make a liniment or thin lute of linseed oyl, quick lime, and red lead; which being smeered over a linnen cloth apply to the crack, upon which being dryed apply another: but if the crack be very great, you may apply three or four linen cloths, for the greater safety sake: as you may apply the whites of egges beaten together, upon the cracks with linnen, and cast upon it quick lime sifted very fine, and press it down hard with your hand: which being done, you may apply over them more linen clouts wet in the whites of eggs, and cast upon them quick lime again: which when the lute is well dryed, retaines the spirits, but sooner subject to the corrosion of corrosive spirits than the former.

Note well that quick lime is not to be mixed with the white of eggs, and so used upon linen clouts, as

the manner of some is; because the whites of eggs acquire a hardness from the lime before they be united, and therefore cannot stick, but linen clouts wet First therewith before the quick lime be cast upon them, so that the lime doth not immediately touch the glass, being applyed betwixt two linen cloths.

How those subtile spirits when they are made, may be kept that they evaporate not.

Those glasses in which those spirits are kept are for the most part stopt with cork, or wax, upon which afterward bladders are bound: which stopping is convenient for some spirits, that do not prey upon cork or wax: For all corrosive spirits, as of vitriol, Allome, common salt, nitre, *&c.* corrode cork, and lixivial spirits, as that of harts-horn, tartar, salt armoniack, urin, wine, *&c.* melt wax, and penetrate it.

And although other stopples might be made, which might retain both sorts of spirits, yet it would be tedious and laborious to open those so often, and to stop them again. Wherefore I have found out a fit kind of glasses, *viz.* of such, whose mouths have distinctions, and are fit to receive their covers; as it appears by the delineation. [*See the first figure*]. *A.* signifies the cover: *B.* the glass containing the spirit. *C.* a drawer by the help whereof the spirits are taken out of the glass, when there is occasion, into the distinction in the brim of the mouth; *viz.* of the glass that contains the spirit, is put quicksilver, and upon this is put a cover; this being done, the Mercury closeth the joynts of both glasses running in the brim, so that nothing at all can evaporate: for the spirits do not penetrate the Mercury, unless they be

very corrosive (a thing to be noted) which then in process of time turn the Mercury into water, but very seldom; and then the Mercury is to be renewed. But we need not give so much honour to corrosive spirits, being not to be compared to those volatile ones, which being abstracted from corrosives not prey upon Mercury; and much less than these, do lixivial spirits corrode Mercury; and for the sake of these were these glasses invented, by the help whereof most subtile spirits are without any loss of their vertues, if you please, a very long time preserved and kept. And because when there is occasion the spirits cannot be poured forth by reason of the Mercury in the brim, you must get a drawer like to that, by the help whereof wine is taken out of the vessel, but lesser, having a belly with a little mouth made very accurately. This being let down you may take up as much as you please, as is needful; the upper orifice whereof being stopped with the finger nothing drops out; being put into a lesser glass is thence poured forth for your use. Then you must again cover the remainder of the spirit that is in the glass, and as oft as is needful take out with that drawer as much as is useful. And this is the best way by which the most subtile spirits are retained; which also are very well retained in those glasses, whose stoples are of glass smoothed with grinding. But this is a more costly way of keeping in spirits, and it is done after this manner.

How glass stopples are to be smoothed by grinding for the retaining of spirits in their glass vessels.

First of all order the matter so that you have glass bottles of several sorts, some greater, some lesser, with strong necks, and mouths, with their glass stopples, which being smoothed by grinding shut the

orifice of the bottle very close: Now they are smoothed thus. Put the stopples in the turn, being set or fastned in some wood, bring it into a round shape, then being moistned with *Smiris*, and water mixed together, let it be put to the mouth of the bottle, so as to be turned round in the mouth of the bottle, which you must often take away from the stopples being fastened to the turn, for the oftner moistening of it, which is with that mixture of prepared *Smiris* and water, with the help of a pencil, or feather; and that so often and so long, until the stopple stop the mouth of the bottle most closely: which being done, you wipe off the *Smiris* with a lint from the stopples and mouth of the bottle, then smeer over the stopple with a liniment made of some fine washed earth, and water, or oyl, and again turn it round in the mouth of the bottle, and often smear it over with this fresh mixture, until the stopple be most exactly smoothed, which afterward is to be tyed to its proper bottle; the same also is to be understood concerning the rest, that one may not be taken for an other, *&c.* And that you may not need to take away so much from the stopples, and bottles, get some copper moulds made for the stopples, which stopples must be taken whilest they be yet warm, soft, and new drawn from the furnace, that they may be made of a just roundness, as also other copper moulds. Which must be put into the mouths of the bottles, whilest they be yet hot and soft, for the better making of them round, whereby afterwards the stopple may more easily, and quickly become fit to stop the mouths of the bottles very close, (as for example: *A.* is the stopple, *B.* the glass or bottle) if thou knowest how to order them rightly, they will quickly and easily fit one the other.

In defect of a turn, proceed after the following

manner, which is slow, yet safe, because in a turn the glasses, oftentimes waxing hot are broken by reason of the over great hast; and it is thus, make an iron or wooden receptacle fit to receive the glass bottle, which being covered about with linen, and put in, join both parts of the receptacle warily and softly, with the help of a screw, that the bottle be not broken, and that that instrument, or receptacle of the bottle being fastened to a form with the help of the screw, cannot be moved. Afterwards cause that another wooden instrument be made for the stopple (as for example, *A.* the stopple with its receptacle *B.* the bottle with its receptacle) that may be separated in the middle, and be again reunited with a screw after the putting in of the stopple, which being smeered over with the aforesaid mixture of *smiris* and water, take the instrument with both hands, and put the stopple round about the neck of the bottle, and grind it round upon the other, as Wine Coopers are used to do in smoothing the taps; and that so long until the stopple be fit for the bottle; then reitereate the same labour with the earth *tripolis*, until it be compleated; and it will stop as well as a stopple made by the help of a turn [*See the second and third Figures before the fourth part.*]

After this manner also you must work those greater glass receivers of the first furnace, that without luting they may be closed. Stopples also of vials or Boltheads for fixation may be wrought after this manner, which in stead of luting may be put into the mouths of the vials, upon which are put caps of lead; by which means in case of necessity they may be lifted up, *viz.* in case the spirits by too strong a fire be stirred up and rarified, by reason of the danger the glasses are in to be broken, and may again fall down into the mouths of the bottles being

pressed down with the leaden caps, and so stop close again. And this way of stopping is better then that which is done with cork, wax, sulphur, and other things: because in case the fire be not well governed, and by consequence an errour is committed, you may preserve your glasses by lifting up of the stopples, *viz.* when the spirits are too much stirred up. And although this be a better way of stopping than the other common way; yet that which follows is better then this, whereby the spirits are easily retained, the glasses being preserved, and without all danger of being broken. And it is thus, *viz.* get a glass pipe to be made crooked according to the figure set down, into the belly whereof is quicksilver to be put from half an ounce to an ounce, or thereabouts, and let this pipe which hath a belly be put into the vial containing the matter to be fixed (as for example. *A.* the pipe with a belly, *B.* is the vial, and again *C.* signifies the aforesaid leaden cap with the neck of the vial *D.*) the joints whereof afterwards are to be covered over with lute, and the vial will never be in danger of being broken. *See the fourth Figure.*

These foresaid ways of stopping are the best, by which the breakings of glasses are prevented, *viz.* whilest men are in an errour about the fixing of spirits of salts, minerals and metals, which although they are fixed with great costs and labours, yet do not satisfie what is promised and expected, because those kinds of fixations are violent and forced, and by consequence contrary to nature: but in the profitable fixation of spirits, not so, where we must follow Nature, and not commit our selves to fortune in our labours. For only fools are wont to break their glasses in their supposed tincture; but Philosophers not so; for *every violent thing is an enemy to Nature*; and all the operations of Nature are spontaneous.

They erre therefore, and never shall come unto their desired end, who attempt violent fixations. I cannot be perswaded that bodies dead, or half dead can be so mixed together as to multiply: but I could easily believe that the conjunction of male and female of one and the same species, sound and nourished with sound and wholesome meats to be natural, and to make a spontaneous propagation, and multiplication of their species; *viz.* of those that endure in a good, and adverse fortune, in life, and death; but the conjunction of dead things, to be dead, and barren. Do but consider how many and various instruments both gold, silver, copper, iron, tin, and lead; as also earthen, glass, stone, and other vessels of other materials have been already invented, and found out for the fixing of Mercury alone with gold and silver, but in vain, because they have no mutual affinity. For although Mercury adheres to metals, or metals to it, yet that is not by reason of any affinity for multiplication, or perfection sake: for it appears by experience that Mercury flies away in the fire, and leaves the gold, silver and other metals. Where it is clear that they have no mutual affinity requisite for the multiplication of metals, nor is it ever possible: For they that have a mutual affinity embrace one the other and abide together for ever, although volatile, yet never leave one the other, like gold and Mercury, when they are united together with the strongest bond, so that they can never be separated although with the strongest fire. Wherefore a great care is to be had in the fixation of things joined together; which if they have a mutual affinity, will embrace and retain one the other, without the help of any curious glasses with long necks. Of which things if thou art ignorant, abstain from medling with them, as being more hurtful then profitable, as dayly

experience both mine own, and others do witness. But that thou mayst the better understand what things have a mutual affinity one with the other: attend a little to what I shall say.

Is not he to be laughed at for his folly who will pour rain, or common water on gold, silver, and other metals to fix them? See therefore the unwise actions of many covetous Alchymists in so hard a matter, that spend their time in trifles, reaping according to what they have sowed, and at last leave off their work which they have undertaken, after they have expended much cost, and spent their labour in stenches, watchings, and cares. For I have oftentimes seen those, that although they have not chosen common water for their *menstruum*, yet have made choice of *May*-dew, snow or rain gathered in *March*, and water distilled out of Nostock, or excrement of Stars; vegetables and animals for their solvent, in which they have lost their labour.

For as the radical union of the aforesaid things with metals is impossible: so never is any good to be produced from thence, by reason of their difference. And such may deservedly be compared to those, who ascending a very high ladder that hath many steps, doe presently endeavour to fly from the lowermost to the uppermost; which is a thing impossible: so neither can there be any conjunction of things that do so much differ. But as any one may easily ascend the highest step by degrees, so also any one may (which yet he need not do) join together extreams, by adding first a thing that is most near to one of the extreams, and then to this another next to it, and so by consequence, until you come to the other extream, which is a thing that requires a very long time, and is a work without profit. And if things be

joined together that have the next affinity, the one will be delighted in the other, and the one will embrace the other, will overcome, and retain it. As for example, there is a certain salt, and that only, that can coagulate, and turn into a body like to it self, even common water, which can be fixed in a very little time, with, and by one only certain mineral, which is very volatile. Minerals also may be fixed by metals, and metals, (a thing which I never yet tryed) by a certain thing more excellent than metals, without all doubt. But therefore it is needful in the fixation of minerals to begin with the coagulation of water, whereby it is turned into salt; and this afterward into a mineral; which would be too tedious; but it is sufficient to begin in things most near, in which nature hath begun to operate, but hath left imperfect; for then there is hope of gain, if contrary things are not joined together, else not. Behold how ready Nature is at hand to help any thing that is administred to it, which it can help: as for example, make salt of calcined Tartar by the help of solution and coagulation (but do not take that for it, of which a little before mention hath been made, which is far better than salt of Tartar) of which after it is calcined, observe the weight; upon which afterwards pour half the weight of most pure rain water; distilled to avoid the suspition of impurity; then draw off the water gently in *Balneo*, or Sand, which again pour upon the remaining salt of Tartar, and again draw it off; this do so often as is needful, until all the water be consumed. Which being done, take out the salt, and weigh it, being first made red hot in the Fire, and thou shalt find it to be increased in weight, which increase came from the water, and not elsewhere.

Note well that the cohobation of the water is to be

reiterated often upon the salt of Tartar. Observe, that by this means, the water is convertible into salt by Art, &c. And if thou dost not believe the conversion of things material and corporeal, how wilt thou believe the conversion of things immaterial, as of the Sun, and Fire into a material fixed substance; of which thing, something shall be treated in our Treatise of *Aurum potabile*, and more at large afterwards in a Treatise *De Generatione Metallorum*, if God permit: For you must know that the circulation of the Elements, and things elementated, *viz.* how one is converted into another; and how they nourish and cherish one the other: as for example, the Earth yields Water, the Water Air, the Air Fire, and the Fire again Earth; which if it be pure, yields pure Earth. But that thou maist understand aright how any thing to be fixed, may be retained by another, by reason of affinity, observe the following example. The Husbandman casting seed into the Earth for to multiply, doth not choose any Earth, but that which is convenient for multiplication, *viz.* an Earth that is neither too dry, nor too moist; for the seed cast in sand cannot grow, but is lost: For whatsoever is to be preserved, is to be preserved by an equal temper; which, by how much it is more equal or like, so much the more perfect substance it doth produce. Humidity therefore being necessarily requisite for the growth of vegetables, without which, they can neither grow, nor multiply, but the seed being cast into moist sand, and the Rayes of the Sun acting upon the sand, and suddenly consuming the humidity thereof, whence follows the burning up of the seed in the dry sand, because there was no affinity betwixt the water, and sand; without which, the water could not be retained by the sand, and consequently, the seed deprived of its nutriment; it

follows necessarily, that some *medium* be required, or bond joining and binding the rain, and sand; *viz.* salt, by the help whereof, the rain water is retained by the sand, that it be not so easily consumed by the heat of the sun.

The sand therefore retains the salt, and the salt, the rain water for the nutrition of the bud: but every salt is not convenient for this business; for although Christ saith, *Luk. Chap. 14*, Verse the last, that earth without salt is barren; yet any common salt is not to be understood thereby: [*See more de Natura Salium.*] for some salts, as common salt, salt of Vitriol, Allome, *&c.* do not only not do good, but do hurt to Vegetables, hindering by reason of their dryness their growth and increase. Now lixivial salts promote them, that which Country-men do better understand, than our supposed Philosophers: for they know how to help their barren ground with the excrements of Animals; which are nothing else but a lixivial salt mixed with Sulphur, making the earth fat and fertile. And by this means a *vehiculum* (rather a bond) is administred to the rain water, that it may the less be consumed by the heat of the Sun. Moreover, all seed (consisting in a lixivial salt and sulphur) loves its like, from whence it borrows its Nutriment, which is observed but by a few Learned or Unlearned. Husband-Men may well be excused of their ignorance, because they work only out of Use and Custome. But others that bear the Title of Learning not so; whose Duty it is to Render a reason of Germination, who may deservedly be Ashamed of their Ignorance, being less knowing than Husband-Men. It is manifest, that Dung makes the Earth Fruitful; but how, and for what reason, not so; but if it did want nitrous salt, it would neither make it Fertile, nor promote Germination: for it is not

unknown, that Nitre is made out of the excrements of Animals. The goodness therefore of the dung consists only in the lixivial salt contained in it, and not in the straw.

But you will ask perhaps, why doth not any other salt help Germination? Why is the salt of dung required to Germination, and no other? We have already answered that, like are helped with like; and contraries are destroyed by contraries: For experience doth testify, that every seed consists in a lixivial salt and sulphur, and not in any acid salt; wherefore also it doth desire and embrace its like. Let him therefore, that will not believe it, make tryal of the distillation of the seed of any vegetable; of which, let him force over a pound by a retort; and he shall see by experience, that not an acid spirit, but a flegm together with plenty of oyl, and volatile salt whitening the whole Receiver, comes over; being that which no root or stalk can do: for the chiefest vertue, odour, and tast of vegetables, animals, and minerals is found in the seed, in which thing provident Nature hath done very well, whilest she attributes the chiefest faculties to the seed, being more obnoxious to injuries then the rest, which is also preserved, nourished; and cherished by its like.

Now this discourse which might otherwise have been omitted, was therefore appointed, that the cause of the germination of vegetables might be made the more manifest; and that what things have been spoken of the attraction, and fixation of all things might the better be understood. The germination therefore, and multiplication of both minerals, vegetables and animals must be spontaneous, and not forced, as is that barren and frustraneous of the false Chymists, because

preternatural. Wherefore when you fix any thing be cautious in the adding of any thing that should retain it, with which nothing can be fixed. Fire indeed doth always do its office; but it knows not how to help any preternatural thing; which it doth wholly destroy, against which nothing can be prevalent, unless it be rightly ordained according to Nature.

And thus much is spoken for instruction sake, to thee that intendest to fix any thing, lest otherwise thou losest thy labour.

Of the making of the best crucibles.

The best crucibles that are requisite for the fourth furnace, not being found in every place, I thought it worth while to set down the manner of making them: for I am not ignorant how oftentimes many for want of these are constrained to be content with those that are useless, and truly with great loss of metals, whilest the crucibles are broken in the fire, and consequently with a tediousness in drawing them out of the ashes.

Chymists have been in a great errour a long time, and not only they but also goldsmiths, and they that separate metals, as also others that need the help of crucibles, who perswade themselves that the best earth that is fit to make the best crucibles is to be found no where but in *Hassia*; and therefore with great charges have caused that Gibsensian crucibles be brought over; not considering that almost in every place in Germany such earth is to be found, which indeed is a very great folly of men, proceeding from the not knowing of good earth which is to be found almost every where. I do not deny but that the earth of *Hassia* is very good for crucibles, tyles, retorts, and other vessels which are to be set in a very great Fire,

for which cause also is commended Gibsensian, and Waldburgensian crucibles.

A few years since some have made their crucibles, and other vessels that will endure the fire well, of earth brought out of *England*, and *France* into *Holland*, which have retained metals very well in the fire, but not salts, because they are too porous and not so compact as those of *Hassia*, wherefore those of *Hassia* are still preferred before others, retaining better, metals, and salts. But although this earth be brought from thence to other places, yet such strong crucibles could not be made thereof, the cause whereof being not the constitution of the air, and place to Which some have falsely imputed it, but an error in the making and burning of them. For in *Hassia* there is a great abundance of wood, of which there is no sparing in the burning the crucibles even to a stony hardness, which could not be done by a smal Fire of turffes.

The like errour is committed about stone pots, and other vessels which are made at *Frechemium* and *Siburgus*, and other places near *Colen*, which are carryed almost through all Europe, the goodness whereof is ascribed only to the earth, and not to the making. But now experience hath taught us that any good earth doth become stony in a violent fire, without respect of the place where it is taken. Wherefore it is very probable, being a thing possible, that such vessels are made elsewhere: for every earth being burnt retaining a white colour, *viz.* with an indifferent Fire, makes pots, and crucibles porous, but with a stronger, and with a longer delay, compact like glass, especially if common salt be cast in a plentiful manner upon them, being burnt with a very strong fire, because it addes to them being very

well burnt within an external glasy smoothness, by which means they will be the better able to retain spirits in the Fire. Wherefore let no man doubt concerning the making the foresaid vessels of any other earth that is white in burning, with the help of a very strong Fire: which by how much the greater whiteness it gets in burning, by so much the better and excellent pots it makes; and seeing there is a great difference of making crucibles to be set in the Fire, and of stone pots retaining liquid things, I shall shew the manner of making both, *viz.* of stone pots belonging to the first and second furnace, and of crucibles to the fourth, and thus it is.

He that will try the goodness of white and pure earth, *viz.* whether it grows stony in the fire, let him cast a peice of crude earth of the bigness of a hens egge into a very strong Fire, observing whether it doth quickly or slowly cleave and break in pieces; which if it doth not cleave and become powder, although it may have some cracks, is good earth, and fit for burning, if so be the mixture be well made, in which lys the art.

The earth that is to be burnt, for pots, receivers, and bottles, needs no other preparation then that for bricks, which because for the most part it is too fat, you must mix with it clean sifted fusible sand, tread it with your feet, and knead it with your hands before vessels be made thereof; which being made are to be dryed in the heat of the Sun, or in some other warm place; and being dryed are to be burnt in a very strong Fire for the space of twenty four or thirty hours, on which in the mean time you may cast salt if you please, which being thus burnt do like glass retain easily all liquid things. But let him that makes crucibles, tyles, bricks and other vessels

appointed for a very strong Fire, use more diligence in the making of them. And truly first he must beat very small with a wooden hammer, the earth being dryed well in the Sun, or elsewhere, and being beaten searse it through a great searse, and to one part of the sifted earth mix two, three, or four parts (the fatness of the earth being considered) of the earth burnt in a potters furnace, and powdered, which being mixed with a sufficient quantity of water he must tread with his feet, and afterwards knead with his hands, and the earth will be prepared for the making of vessels, and when he makes crucibles and tests, let him provide for wooden moulds both greater and smaller, made in a turn, by the help whereof they may be made, for the aforesaid vessels cannot be formed by the usual art of the potters; because the matter of them must be very lean, appointed for a most strong fire; wherefore commonly they are made by the help of moulds after the following manner.

Let a piece of the prepared earth be applyed with your hands to the mould, which you must hold in one hand, applying and fitting the earth thereto with the other, or hold it with your legs, that the earth may be applyed with both your hands. Also you must first rub the mould very well with clean sifted sand, for else the earth will so stick to the wooden mould, that a crucible can scarce be taken off without danger, which being done, it is further fitted by striking it with a wooden instrument smoothed for the purpose, by which means the crucible lyes very exactly upon the mould, for by this means crucibles are made very strong; which being done also let the crucible be taken off, and set upon a board, and be dryed, first in the air, then by the heat of the fire, or sun, and then be burned in the first chamber of our

fourth furnace, or in a potters furnace. And if you intend only to melt metals and not salts, you need not burn the crucibles if they be well, and exactly made.

Now this caution is to be observed in melting by the help of crucibles not burnt, that you must give fire above by little and little, for fear of breaking the crucibles feeling a suddain heat.

Now that they may be made equal in strength, weight, and thickness, you must weigh one crucible rightly made by the help of the mould in one scale, and a piece of the prepared earth, which is to be put into the other scale, and if they be equal in weight, take out that piece, and put in another; and this do so often, till you be come to the number of the crucibles which you would have made: By this means they are made equal, and you need not cut off any overplus of the earth when it is fitted to the mould, because all are made equal, by reason of the equal weight of the matter of each of them, and the work is sooner done then otherwise.

This indeed is the best way but tedious and laborious, wherefore considering the matter a little more seriously, I found at last that the following way is far better than the former: whereby not only stronger crucibles are made, but also more in one hour, then in that former common way in three or four. Where first, the mould is made of latten (on which I advise you to apply the earth) signified by the letter *A*. *viz.* that being the best, which is made by the help of fusion. Then the counter-mould answering this, signified by the letter *B*. yet so that that do not enter too deep into this, not touching the bottom by the distance at least of one fingers breadth; but in greater crucibles a greater thickness

of the bottom is required, as the practise will teach thee.

Let him therefore that is making crucibles apply the earth to the mould, as hath been above said in the First manner, which being done, let him again take off the crucible that is formed or cast, and set it in the air to be dryed. Then having First made a sufficient number of crucibles, let him make the mould clean from the earth or sand, and annoynt it with grease, or oyl Olive taken up with a sponge, as also the counter-mould, into which let him put the crucible being half made and dryed, and into this the mould, which he must strike above twice or twice or thrice with a heavy wooden mallet, that the earth may be rightly, and exactly applyed to the mould; which being done let him take off the mould, and turn the countermould together with the crucible, which let him knock a little against the form (where the crucibles are made) and let him take in his hand the crucible falling from thence; which he must afterwards dry and burn, as hath been above said in the First manner. And by this way are made the best, and the best proportioned crucibles, Fixed and smooth, not only for melting of metals, but also for minerals and salts; the like to which I never yet saw, as being without all danger, if so be rightly made of the best earth. And that they may be made equal in weight and strength, they must be weighed as before hath been said, And this labour is easie and pleasant, when they are made with ones own hand, and that greater or lesser at pleasure.

After the same manner also are made tests *viz.* by the help of the like kind of moulds, which must not be long but plain like shells as appears by the annexed Figure, *A.* and *B.* Not only tests but also

cuples are made by the help of these moulds. [*See the fifth and sixth Figures.*]

Now tests are made more easily this way then crucibles, because the earth only is weighed, and being handled with the hands is put into the counter-mould, which then you must with the upper-part press hard; that it may be made conformable to the mould, *viz.* plain, not long, that which may easily therefore be made; and for this cause those crucibles are easily again taken out, *viz.* if the mould be turned, or the counter-mould be a little knocked against the sides of the form. And if the earth be beaten in too fast that it goes out at the sides, you must cut it off with a knife, or else the crucible, or test is hardly taken out, sticking to the brims, which practise will teach thee. For all things cannot be so accurately demonstrated by a pen.

And take this for a caution, that thou do not make thy tests and crucibles of earth that is too soft, but of that which is half dry, otherwise they are hardly taken out of the moulds; for that is more easily and rightly applyed to the mould. And if thou proceed rightly according to the prescript, scarce one crucible of a hundred will be lost.

This also is to be observed, that the superfluous earth which is cut off must not be mixed again with the mass for crucibles, because it is spoyled with the fat, or oyl that is smeared over the moulds, and therefore cannot be so well mixed again, and being burnt cleaves, for which cause bad crucibles are made. Wherefore it is to be kept apart for mending of furnaces that are spoiled with an extraordinary heat of the Fire; or for covers of crucibles that are to be made by the help of the hands only, or of moulds, which we cannot want, if we would work all things

exactly.

Now for tyles, and other vessels that serve for distillation, and melting, they are made by the help of wooden moulds after this manner. Let the mould be made exactly like to the tyles, and other vessels, then cut off leaves from the earth being very well prepared, with a copper wier upon two equal tables of wood, and then a piece of the earth is to be laid with a knife upon the mould, that it may there get some hardness; which afterward is to be taken away, dryed well, and burnt. And if any thing further is to be done, *viz.* by cutting off, or adding, it must be done by earth half dryed, or a little hardened. For by this means any one may get for himself earthen vessels that are necessary, without much cost or pains for certainty sake. For those that are sold, are negligently made, in which oftentimes in the drying, the cracks which are made, are filled up with some earthen liniment, before they are burnt, which therefore are not durable in the fire, but are broken, and that oftentimes not without great loss of the metal, which is again to be gathered out of the ashes by the help of a tedious washing. It is better therefore to work those vessels with ones own hand for certainty sake. For not all and every crucible can alwaies and every where be made equal, and be of a like durableness in the Fire, though they are made most diligently: and therefore a consideration being had of their goodness, they may be used for divers uses, and the better may be used in the melting of the better metals. But let no man perswade himself that all these can indifferently hold in the Fire, although they be the best of all, how many soever you make; for I never yet saw any earth which could hold litharge in the Fire and salt of Tartar, because the best that ever I saw is not free from penetration

of them, which is the greatest impediment of some profitable operations, which therefore are omitted.

And let this which hath been spoken, suffice concerning the making of crucibles: let every one therefore that hath a care of his business, use better diligence for the time to come in the making crucibles for more certainty sake, and he will not repent of his labour. Now how Tests and Cuples may be exactly applyed to the aforesaid Molds, is not my work at this time to shew, because many years since it hath been done by others; especially, by that most ingenious Man, *Lazarus Ercker*, whose Writings concerning the manner of making of Tests and Cuples I cannot mend, to which Authors I refer the Reader, where he shall find sufficient Instruction and Information concerning this matter. But there are also other Tests, of which I shall say nothing in this place, but elsewhere happily I may, by the help whereof, lead is bettered in tryal if it be sometimes melted again.

Of the vitrification of Earthen Vessels belonging to the first and second Furnace.

In the defect of glass Instruments belonging to our first Furnace, you may make such as are very useful, of the best Earth, which being well glazed, or double glazed, are sometimes better than old Glass; especially, those that are made of Earth that do not drink up the spirit, such as is found almost every where, which becomes stony being burnt: Now the Art of burning hath not hitherto been so well known, of which something hath been said already, where the Earth being burnt with a very strong fire, is made so compact, as that it becomes hard and solid as a stone. The Potters Furnaces being too weak for this

strong burning, there is required a peculiar Furnace for this Work; in which, the strongest fire for the burning of them may be made: But because no body thinks to build such an one, only for some few Vessels not worth the spending of costs and labours: there is yet another way of vitrifying of any sort of Earth (red Clay only excepted) not to be slighted if well done; especially, if the matter vitrifying when it is cold after the burning is ended, doth not cleave and chop, and it is not hurt by corrosive spirits as the glass made of lead, retaining spirits, as well subtle as corrosive, as that white vitrification of the *Italians* and *Hollanders*: you must therefore in defect of a fitting Furnace, wherein Vessels being burnt become stony, make them of the best Earth, and glaze them with the best Glass of Tin, but not of Lead; and by how much the more the calx of Tin goes into the vitrifying mixture, so much the better is it made; for Tin being reduced into a calx with Lead, hath no more affinity with corrosive spirits; wherefore it is more fit for vitrification. But he that will not be at so much costs, let him vitrify with Venice Glass powdered, which vitrification also is not to be slighted, requiring a very great heat for the burning, and therefore flowing with great difficulty in these common Potters Furnaces; wherefore you must mix some Borax with the Glass, that it may flow so much the more easily in the Potters Furnace; else you must pour upon the earthen Vessels being burnt, Water mixt with Glass, so that it the Glass may stick to them every where exactly, which afterwards being well dryed, shall be gathered together into one heap artificially, lest they take up too great a space, like earthen Dishes that are to be burnt, and afterwards compass them round about every where with burnt Bricks, an hole being left open above for the casting

in of coals, yet so, that the Bricks be distant from the Vessels the breadth of an hand, whereby the coals being cast in above, may the more freely go round about down to the bottom; which space being filled with dry coals, you must put upon them other living coals, that the fire being kindled above, may by little and little burn downward and perform its work; which being so done, the Vessels will be out of all danger, if so be they are all well dryed.

The fire being kindled and burning, you must cover the hole with stones, until the fire of its own accord be extinguisht; the coals being spent and the vessels become cold.

N. B. Now if there be a great heap of vessels, you must first, the coals being burnt, add fresh coals once more; for else the vessels being placed in the middle, cannot be sufficiently burnt, nor the glass sufficiently flow; wherefore caution is required in the governing of the fire in this manner, where, if all things are rightly done, the vessels are better and more truly burnt and vitrifyed than in any common Potters Furnace whatsoever; yet with greater danger to the vessels than in a Potters Furnace compassed about with walls. But let him that burns crucibles and other smaller vessels, burn them in our melting or distilling Furnace, being covered with coals, giving Fire first above, for so I my self was wont hitherto to burn all my crucibles, and burn and glaze all other distilling vessels; and this in defect of fitting Furnaces is the best way of burning and vitrifying, where in three or four hours space, the vessels are exactly burnt and vitrifyed. Now the earth that is to be burnt quickly, must be the best, and durable in the Fire, for fear of breaking of some of the vessels. Let him therefore in this case for security sake, use our fourth Furnace,

who hath built it with his chambers, in the first whereof he may burn and vitrify without any danger. But that foresaid way of burning and vitrifying, is not to be slighted; wherefore I would have thee be admonished to be cautious in giving of Fire, that you give no more or less than you should, lest afterwards you impute the cause of your errour committed, to me, whilst the vessels are broke as if I had not wrote the Truth, but to thy self that errest, and must for the future be more diligent, and cautious in this work.

I know other vitrifications of divers colours hitherto unknown, and indeed most secret, not to be communicated to every one indifferently: but he that knows how to reduce metals into a true glass, retaining the colour of its metal, is indeed the inventor of a very great secret; to whom, if he consider the matter more profoundly, and exercise himself therein, a Gate is open, with the blessing of God, to a greater light.

There are also other vitrifications, with which the earth being covered doth appear, as if it were adorned with Gems; but because it is not our purpose now to treat of such kinds, I shall make an end of vitrifications, one only excepted, which I shall communicate for the sake of the Sick, and Physitians; and it is this:

Make little earthen Cups very smooth and white of the best earth being burnt: then make the following glasse to flow in a very strong crucible, in which dip one cup after another, being held with tongs, and first made red hot in some little Furnace, letting them lye covered therein for a while, that the earth may the better attract the glass; which being done, let them be taken out, and be set again into the

foresaid collateral Furnace, where they were before made red hot, when one is taken out, dip another in the molten glass in its place, which also is again to be set as the first into the aforesaid Furnace; and this is to be reiterated so often, until all the pots be covered over with glass: all which being done, the Furnace is to be shut close every where, that the wind enter not into it, and so it is to be left until it become cold of it self, and the glass covering over the cups remain intire, which otherwise cannot be if the cups be set in a cold place; now the glass is made after this manner.

Take of crude Antimony two parts, of pure Nitre one part; grind them well being mixt together, kindle the mixture being put into a crucible with a red hot iron, and the Sulphur of Antimony will be burnt together with the Nitre, a mass of a brown colour being left behind, which you must take out while it is hot with a spatle that it may cool, which afterwards being melted in another strong crucible for the space of half an hour, or an hour, makes that glass with which the aforesaid cups with their covers are covered over.

Of the use of the aforesaid Cups.

There is no one that can deny that Antimony is the most excellent of all vomitives, wherefore, so many and so various preparations have been invented by Physitians for the taking away of the malignity thereof; whereof I have shewed some, together with the use thereof in the First and Second Part of this Book, where alwaies one is better than another; yet notwithstanding 'tis confest, that Antimony reduced into Glass, is sufficient to purge the Stomack and Bowels from all corrupt Humors, and that without all

danger, (being rightly administred) as well by vomit as by stool, by which means many grievous imminent Diseases are not only prevented, but also presently are cured.

But you infer, that this is yet a crude and imperfect preparation, and therefore not so safe. To which I answer, that Antimony that purgeth, needeth no preparation, for if all the crudity thereof were wholly taken away by fixation, it would no more cause vomiting or stools; wherefore the aforesaid glass of Antimony is not to be feared, because it is not dangerous, but may safely be given to Children that are one or two years old, but not in form of a powder, but in infusion or extraction of its chiefest vertue made with honey, sugar and wine, sweet or sowre. After which manner being given, it attracts from all the bowels all vitious humours, and evacuates them as well upward as downward, without danger; of which thing elsewhere more at large. Let him that useth the aforesaid Cups, infuse one or two ounces of wine, and set them a whole night in some warm place, and the wine will attract from the glass so much as doth suffice it, which afterwards being drank in a morning, doth perform the same as an infusion made with the powder of Stibium; and this is a more delicate way than the other, because a Cup is sent to the Patient that he may infuse in it the space of a night, two or three spoonfuls of proper wine, placeing it in some warm place, which he may drink up blood warm in the morning, with a due ordering of himself afterwards: Which, in my judgment is a more delicate way, being made with ones one wine, and ones one hand, than that tedious way of potions, both large, bitter, and nauseous. And this Cup may oftentimes be used, and if at length the wine should not attract sufficiently,

the Cup with the wine is to be set in seething hot water for a little time, that the wine might the better attract, and work, when need shall require. Now he that gives such kind of Cups to others, must instruct them concerning the ordering, and administring of the same. One Cup is sufficient for the Master of a Family, with his whole Family for all the daies of their life. It is not to be used by all, and every one, and in all Diseases indifferently, but only by those that are strong and young; and where the principal parts are not hurt. Cups may also after another way be covered over with Glass without Antimony, as follows.

Sublime *Auripigmentum* in a Glass or Earthen Gourd; and take the gallant golden coloured Flowers thereof, which being after a peculiar manner melted, yield a red and most beautiful Glass almost like an Oriental Ruby, which being broken in pieces, may be used in stead of an Ornament; but this is more soft, and brittle, than Glass of Antimony. This Glass, or those Flowers of *Auripigmentum*, which are not yet reduced into Glass, do notably glaze the aforesaid Cups with a red beautiful Colour.

He therefore that will vitrify the aforesaid Cups, must first heat them red hot in a Fire made with Coals; and being thus hot, dip them in the aforesaid melted Flowers, and being taken out thence, put them under an earthen, or iron red hot vessel, and there let them cool which do perform the same things as those which are said of the Antimonial Cups.

These Cups are not dangerous, as to be feared, because as Antimony is corrected by calcination, so *Auripigmentum* is by sublimation: from which, if all the malignity be taken away either by Fire, or by

nitre, the vomitive vertue is taken away, as afterward shall be demonstrated more at large in these five parts, when they shall come forth again with enlargements, *viz.* what purging things are, and how they put forth their vertues, a consideration being had of their malignity.

There are also other ways of vitrification, and indeed very fine, and most desireable by all, if they should be communicated; but because it is not now my purpose to treat here of mechanical things, but only of some particular vitrifications of vessels belonging to our furnaces, I am resolved to omit them at this time, and make an end of these things. I am resolved, God willing, to set forth these parts more corrected, and in a larger manner, where many excellent things now omitted for some reasons, shall be published, and communicated.

Wherefore I will now put an end to this fifth part, where although I might have added something that is singular concerning artificial furnaces, yet because time will not now permit, it shall be deferred to another time and place, where we shall treat further of the examining, trying and separation of metals: For the best way of melting of metals in a greater quantity hath not yet been known: And although they that deal in minerals perswade themselves of the perfection of their art, yet I can demonstrate an easier, and more compendious way of melting of metals in a shorter time, in a greater quantity, and with less costs and pains. Of which more at large elsewhere, wherefore (Courteous Reader) be contented with these things, and if I shall see that these few things shall be acceptable to thee, I will sometime hereafter for thy sake and to thy profit communicate *wonderful secrets* which the world will

not believe, and which hitherto are hid, either out of envy or ignorance.

FINIS.

AN APPENDIX.

Two years since I began to publish my new invented furnaces where also there was mention made of some secrets, which though I thought never to divulge; yet nevertheless I underwent many troubles for the communicating of them. Wherefore I beseech every body that they would no more create troubles to me or to themselves by their petitions or writings, because for certain causes I shall for the future communicate nothing but those things which follow. Expect therefore patiently the time of another Edition, when these five parts shall come forth more corrected and enlarged, and many most choice secrets shall be communicated, which were for certain causes omitted in the first Edition.

I shall now God willing communicate those things which follow, yet upon this condition (because many are such, that by means thereof thou maist with a good conscience, without hurt to thy neighbour, through Gods blessing, get great riches) that thou be mindful of the poor, and a good steward of riches got honestly, and use them to the glory of God and the eternal salvation of thy soul.

The preparation of corn, as of Barley, Wheat, Oates, *&c.* of Apples, Pears, Cherries, *&c.*, where

fermentation being made they do yield by way of distillation a pure spirit very like to the spirit of wine without great costs; of the remainders whereof if the matter were corn, may be made good beer, or vinegar; but if the matter were any kinde of fruit, as apples, pears, a very good drink like to wine, so that by this means thou maist find a double profit, by which thou maist not only have whereby to live honestly, but also to lay up for thy heirs.

An excellent and wholesome drink of fruit, and corn, that is durable and like to Spanish, French, and Rhenish wine.

A distillation of the *Aqua vitæ* of certain vulgar things not costly and like to the *Aqua vitæ* of French and Rhenish wine.

A preparation of sugar like to the Western, and of tartar like to the natural Rhenish, out of honey and not costly; where one pound of sugar doth not exceed the price of eight or ten stivers, and a pound of tartar, that doth not exceed the price of two stivers.

A peculiar purification of crude tartar without loss, and a reduction of it into great crystals not costly, so as the price of one pound doth not exceed six stivers.

The taking away of the ingrateful tast and odour of honey so as afterwards there may be made from thence a certain good *Aqua vitæ* retaining no more the smell and taste of honey: also a very good Mead or Methegline like unto very good wine, with which the same things may be done as with the best wine.

A preparation of Mead out of raisins, great and small, very like in all things to Spanish wine; out of which also is made a very good vinegar without great costs.

A preparation of wine and good vinegar of wild grapes.

Durable and wholesome drinks of gooseberries, barberries, mulberries, strawberries, and the like.

The mending of troubled acid musty wines, *&c.*

The preparation of a very good vinegar out of certain vegetables which are to be found every where, which may be compared to that which comes out of France, and in a great abundance, whereof two rundlets of nine Gallons do not exceed the price of one Royal. [A Royal or Imperial is 4 *s.* 6 *d.*]

The promoting of the ripening of wines of the cold countries of Europe (a very few that are very cold being exempted) that they may yield very good sweet and durable wines, whereas otherwise they could come to no maturity, being very like to those which hotter countries yield.

A certain secret way of carrying wines from mountainous places, where carts, ships, and other commodities are wanting, where the carrying of ten pipes, doth not exceed the price of one pipe otherwise carryed, so that by this means, outlandish wines may be brought to any place with great profit.

A very good and easie preparation of verdegrease out of copper, whereof one pound doth not exceed the price of six stivers.

A new and compendious distillation of vinegar, of which a rundlet of eighteen gallons doth not exceed the price of half a ryal, with which many things may be done, especially the crystallizing of verdegrease, of which one pound prepared after this manner, doth not also exceed the price of half a Royal.

A compendious and very easie way of distilling a

very strong spirit of urin, and that without any cost and pains, so that twenty or thirty pints shall not exceed the price of one royal, being very excellent in medicine, Alchimy and Mechanique affairs, by the help whereof a most beautiful blew vitriol may be made out of copper, being very profitable in Alchimy and medicine, making silver so fusible, that by the help thereof, glass vessels, as basons, dishes, and candlesticks, *&c.* may be so guilded as to be taken for silver.

A way of distilling the spirit of salt in a great quantity, and that with small costs, so that one pound thereof will scarce exceed the price of six stivers being very excellent in Alchymy, Medicine, and other Arts; especially for the doing of these following things, *viz.* the separation of gold from silver without hurt to the Cups or other things, also the solution and separation of gold mixt with copper and silver by the force of precipitation, where the *Menstruum* that is preserved, may again be used for the same uses, which separation is the easiest of all other humid separations, whereby gold is reduced to the highest degree.

The separation of volatile sparkling gold out of sand, *&c.* very profitable, without which otherwise it could never be separated, neither by the help of Washing, nor by Mercury, nor by the force of Melting.

An artificial secret, and hitherto unheard of, trying of stubborn Metals, finding out their Contents, which otherwise could not be found out: for oftentimes there are found golden mines, which are stubborn, in which nothing is found out by the common way, and therefore they are left unlaboured in, and sometimes elsewhere, where there are not found Mines of

Metals, there are found other things, as white and red talc, that yield nothing, being tryed the common way, or very little, all which yet abound with gold and silver, which may be separated this way.

A new, and unheard of compendious way of melting Mines in great plenty, where, in the space of one day, by the heat of a certain separating Furnace, more may be melted than by the common way in the space of eight daies, where not onely costs are saved, but also is hope of greater gain.

Another way for the better proving of things melted, and a new way of separating silver from lead.

A very speedy way of melting Minerals, whereby they are melted in great plenty, by the help of Pit-coals in defect of other coals.

The fixation of Minerals, Sulphureous, Arsenical, Antimonial; and others that are volatile, which cannot be retained and melted by the force of fire, by the help of a certain peculiar furnace with a grate, so that afterwards they may by infusion yield gold and silver.

The getting of gold and silver, that sparkles, and is rarified, out of sand, pure clay, flints, *&c.* by the help of melting.

The separation of gold lying hid in baser minerals and metals most profitable, which cannot be done the common way.

A very quick Artificial and easie separation of melted gold and silver by the help of fusion, so that in the space of one day, by the help of one furnace, some hundreds of Marks may be separated with far less costs and labour, than by the common way by

cement and *Aqua fortis*.

The reduction of elaborated gold, of chains and other ornaments unto the highest degree; also the separation of gold from guilded silver, by the help of fusion, by which means a hundred marks are more easily separated than twenty of the common way.

A certain way whereby more silver is separated from lead then by the Copper.

A separation of good gold from any old iron, which although it be not a labour of great gain, yet it is sufficient for those who are contented with a few things.

A separation of gold and silver, from tin or copper, according to more or less. The maturation of mines, so that they may afterwards be able to yield more gold and silver, then by the common way, also the separation of gold and silver out of Antimony, Arsenick, and *Auripigmentum*.

The separation of the external sulphur of *Venus*, that the Son *Cupid* may be born.

The separation of silver from the cuples, into which it enters in the tryal without melting or any other labour or cost.

The preparation of divers earthen things to be done in any part of the world, like to the Porcellan, that hold fire and retain spirits.

A certain Allome exalting and fixing any colour, especially requisit for scarlet and other pretious colours, with a certain perpetual cauldron, that doth not alter colours, and is not costly.

A making of colours for painters, as of purple gum, ultra-marine, not costly, and especially of that rich

white, never before seen, like to Pearl and Margarites; also a peculiar colouring of gold and silver.

To conclude, I refer the Reader unto the Residue of my Books, that Treat of those Secrets more plainly; which I am resolved shortly to put forth.

Those Secrets are all openly taught in the following Treatises, as in the Explication of Miraculum Mundi, Apology against Farner, Prosperity of Germany, &c.

FINIS.

Of the Tincture of Gold,

Or the True

AURUM POTABILE:

What it is, and how it differs from the false and sophisticated Aurum Potabile: How it tis be Spagirically prepared; And how to be used in Medicine.

Of Aurum Potabile.

There is no man that can deny, that the true and ancient Philosophers did study long life, and the conservation of their health. Whence it came to pass that they did diligently seek out the subject of preserving health, and prolonging life: wherefore by the help of fire they did practise the separations, and proofs of all vegetables, animals, and minerals, seeking out their powers and vertues: Who found out the greatest harmony of all things as well in the heavens, as on earth, betwixt the Sun, Gold, Man and wine. For it cannot be denyed, that the life of all things proceeds from the heat of the Sun; wherefore they sought to unite gold the terrestrial sun or body fixed and perfect, caused by the rays of the sun, with man by the help of spirit of wine.

But haply there will be some, whom this my narration may offend denying that gold is the Son of the sun, or a metallick body fixed and perfect, proceeding from the rayes of the sun; asking how the solary immaterial rayes can be made material and corporeal? But they are very ignorant of the generation of metals, and minerals. And although I am not now resolved to write of the generation, and original of metals, yet endeavouring to demonstrate that there is a vivifying power of the sun to be found in gold (destroyed and volatilized) and to be prepared into a most wholesome medicine for man, I will not omit for the sake of the ignorant and incredulous, to demonstrate the truth by one or two examples, which although I could demonstrate by most certain and firm reasons, yet for brevities sake I am now resolved to omit them, recommending to the searcher of the Nature, and propriety of metals, my treatise *De Generatione Metallorum*, which without doubt will take away all scruple from him; objecting only against him that oppposeth the truth, two

questions and reasons which are to be confuted: and the first is, whence comes that increase of both the quantity and quality of any viscous, mineral liquor, that hath been exposed long to the Sun in an open glass vessel? Whether from the Sun, or elsewhere? But thou sayest, that that encrease comes from the air, the vehicle of all things. I answer, if from the air, whether was not that air impregnated by the Sun? and whether there be any thing in the air, which it received not from the stars? But place this liquor in a cold Cellar, in a moist air, and thou shalt by experience know that no weight is added thereto, even as in the Sun, or (in his stead) fire: that Liquor will draw some phlegmatick moisture which will be easily separated by heat, the weight of the former liquor being left. This may be shewed by this Example: dissolve some sulphurous metal, as Iron, Copper, or Zinck, with any acid spirit, and at length take away the spirit, make the remainder red hot; yet not too much, but as much as sufficeth to take away the spirits, which afterward (its weight being observed) put in a crucible on the fire, but take heed lest the metal run over, but at length let it darkly glow with the crucible, for the space of three or four weeks, which done, take it away again, and weigh again the metal, and thou shalt find the evident encrease of the metal, which thou shalt perceive more evidently by this way, as follows: Put copper, or some sulphurous metal, with 16 or 18 parts of lead in a well-burnt cupel; made of the ashes of wood or bones, in a tryed furnace, (the weight of the cupel, copper, and lead first exactly observed) and cause the copper to evaporate by fire with the lead, which done, take the cupel when it shall be cold, and again weigh it, and thou shalt find it far more weighty, so that its weight (though much of the lead

goes into air in the cupellating) not only exceeds its former weight, but also of the copper and lead by the said cupellation; therefore it is justly demanded whence this Encrease proceeds, whether the heat of the fire was not coagulated into a metallick body by means of that melted metal? Therefore it is probable, that if you knew the metallick matrixes in the surface of the earth, in which the beams of the Sun and heat of fire being received, may be coagulated, metals may as well be generated in them, as in the bowels of the earth.

But thou repliest it is probable the heat of vulgar fire to have something metallick in it, which comes by attraction of the melted metal in the Cupel, but not in the Sun-beams.

He that will thus try the truth, let him put a cupel very well burnt in the beams of the Sun, together with copper and lead, to which let him apply a hollow Looking-glass, so that it may be operated upon by the Sun-beams gathered into a center, and may thence be made hot: But thou must continually hold the Looking-glass in thy hand, that thou maist turn or direct it to the Sun, according to the course thereof, lest the cupel wax cold, the beams of the Sun being turned away, but if it be rightly observed, the work shall be done no less than in a furnace of fire with glowing heat.

You must have a Looking-glass at least in diameter two feet, nor must it be too deep; but be in depth the 18 or 20 part of the globe, that so it may the further cast the beams: it must be very artificially smoothed, that it may more exactly gather the beams to the center. Now the preparation of these burning-glasses is not of this place, but in the fourth part of our Furnaces, where we have taught not only how they

are to be made of metals, but also of glass, and how polisht and used.

This demonstration, which might be otherwise omitted, is therefore set down, that it may be known how Gold proceeds from the Sun, and is secretly endued with its proper strength and proprieties, by Chymistry, reducible into that which it was before its coagulation, namely, into a heating and living spirit, communicating its strength and faculties to man's body. Therefore the Ancients used great diligence in the reduction of gold, in which nothing is found more excellent than the purest and finest spirit of wine made by distillation, and they did not use common gold melted out of stones, or washt out of sand, but purged by benefit of fire, and Philosophically quickened and unlocked, not by help of corrosive spirits, the usual way of vulgar Chymists, but by some water which Nature freely gives without help of violent distillation; by which they manifest that which is hid in gold, and they have hid what is manifest, and therefore they have made it fit for the separation of its tincture from a gross and black superfluous body. For they knew that the compact body of gold hath no affinity with the vital Spirits, therefore they have chosen only the finest part of gold to their Elixir, *viz.* Its tincture, which they have radically joyned with the spirit of Wine, and being joyned, have made them spiritual or volatile, so that neither can be separated from each other in the fire, and being in the fire, are sublimed, or fixed by a longer digestion; and coagulated into a fixt stone, which they count for the greatest treasure in this World. Therefore the ancient Philosophers affirming, that there is not a better medicine under the Sun than it, which is made from the Philosophical union of wine and gold, both by an

inseparable recoagulation and fixation; nor without gold can spirit of wine, nor this without it be made a medicine, because gold without spirit of wine cannot be made volatile, nor this be coagulated and fixt without it. We therefore, their posterity justly, follow the opinions of the most famous men, not for their authorities sake, but for ocular demonstration, which is the truest tryal.

Therefore the knowledge of the preparation of this medicine being bestowed on me from the highest, I have intended, because a man is not born for himself, briefly to deliver its preparation and use: but I will not cast pearls before swine; but I'le only shew the way to the studious searchers of the work of God and Nature, who doubtless will understand my writing, but not the ignorant and unskilful; let therefore the brevity of the preparation offend no man, because I mean not to prostitute this Art (divinely obtained, not with idleness, but with much watching, labours and pains) nor give to the unworthy a bit before chawed, but only to communicate it to the pious, who shall see with open eyes, that the thing is so. I desire therefore, the simplicity of my stile may offend no man, being not adorned with rhetorical figures, after the wonted manner, for truth wants not many and elegant words, being contented with simplicity and brevity, with which it is easier and better demonstrated, than with those intricate and sophistick discourses.

℞ of living gold one part, and three parts of quick Mercury, not of the vulgar, but the Philosophical every where to be found without charge; and labour, (thou maist also add living silver of equal weight with the gold, and indeed better than only gold, for the greater variety of colours proceeding from the

mixture of male and female: but one perswaded that a better Tincture proceeds from gold alone may mix gold only, not so, one skilful of metals, who knoweth the power of the cordial union of gold and silver, dissolved in one and the same *Menstruum*) put them mixt in a Philosophical vessel to dissolve, and in the space of one quarter of an hour, those mixt metals will be radically dissolved by the Mercury, and will give a purple colour; after encrease the fire by degrees, and it will be changed into a very fine green, to which taken out, pour the water of dew to dissolve, which may be done in half an hour, filtre the solution, and abstract the water through a glass alembeck in B. which pour out again afresh, and abstract, which do three times, in the mean time that greeness will be turned into a black colour, like Ink, stinking like a carcass, and therefore odious: and it behoves sometimes to take away the water reaffused and digested, and that blackness and stink will depart in the space of forty hours, and will produce a pure milky whiteness, which appearing, take away all the moisture till it be dry, which will be a white mass, and in few hours of a pleasant colour, divers colours first appearing, it is turned into a fine greeness better than the former, to which you must affuse the spirit of wine well rectified, to the depth of two or three fingers, and that green gold dissolved will draw that spirit of wine, for the great amity, like a dry spunge drawing waters, and will communicate to it a quintessence as red as blood, by which means the greeness is deprived of its quickening tincture, the superfluous ashy body being left.

You must decant and filtrate the tinged spirit, and in a B. by a glass alembeck, abstract it from the red tincture, attracting the fiery essence of the spirit of wine, so that they may be very close and inseparably

conjoyned, from which an unsavoury water only distils, the vertue of the spirit of wine being left with the tincture of gold like a red fiery salt, fusile and volatile; of which grain 1. can tinge ʒ i. of spirit of wine, or any other liquor, with a blood-red colour, for it is soluble in any moisture; and therefore may be kept in a liquid form for the Panacea of most desperate Diseases. Now I will communicate the proprieties of the true tincture, by which true potable gold is known. This tincture next the stone is the best of all medicines, between which and that, there is but this difference, the soul of gold is volatile, nor hath entrance into imperfect metals, and therefore cannot transmute into pure fine gold, which vertue is attributed to the Philosophers stone. The soul of gold, though it be the best part, yet it is not fixt in fire, but volatile; but the Philosopher's Stone is fixt in fire, and remains, by reason of a longer digestion. But whether that soul or volatile tincture and red Lyon may be fixt by help of fire, and turned into the Universal medicine, and tinging stone, that I know not, because hitherto I have not tryed, *&c.* therefore he may who extracts the soul of gold, make further tryal, whether he can find any thing better. For this Work treateth of nothing but the best medicine of gold, but other things I know not.

Therefore the deceit of the Distillers of Wine, and other vegetable waters, selling potable gold, is not unknown, being not ashamed to sell any water coloured yellow or red to the ignorant for a great price. And the errour of others dissolving the body of gold in *Aqua Regia*, or spirit of salt, which again they abstract to a dry remainder, to which for extraction they affuse the spirit of wine: Which is not an extraction, but some particular solution of gold,

made by help of the corrosive spirits left in the gold, tinging the spirit of wine with a yellow colour, which so coloured, they call their potable gold; which notwithstanding is reduced into gold, the spirit of wine being abstracted, which can do no more than any other Calx of gold, which the *Archeus* cannot digest, but separates, being indigested, with the Excrements. And also it is the errour of others, ignorantly deceiving themselves and others, extracting the Calx of gold with peculiar *menstruums* and spirits, knowing not that the *menstruum* affused to gold to be red of it self by a long digestion, which decanted, they administer instead of potable gold, who if they weighed the remaining Calx, would by experience see that nothing departed from the gold; which you may try by the setting the spirit or *menstruum* in a remiss heat, or longer in cold, which of it self doth wax red, as if it had been affused to the Calx of *Sol.* But the cause of this redness is (unknown to them) nothing but a certain nitrous salt and volatile, as of Antimony, Urine, Tartar, Hartshorn, Hair, *&c.* exalting the colour of any Sulphur.

Wherefore it necessarily follows, if *Artists* mingle with the spirit of wine in which is a sulphur, such exalting salts, that it will thence be exalted in colour, and wax red; which also happens to them, who use to extract a tincture with distilled Oyls, having a volatile salt, as are oyl of Lemmons, Cloves, Soot, *&c.*

For such-like tincture or potable gold is inefficacious, as experience witnesseth. But I would not say there is no other tincture to be prepared out of gold, beside this tincture: for being dissolved in sweet *menstruums*, that it cannot be separated by precipitation, it can do wonderful things in many grievous Diseases; but alwaies the living metal is to

be chosen instead of the dead.

But true potable gold is not so only in name and shew (as are divers waters tinged with a yellow or red colour) but also endued with golden faculties and vertues, so that it may actually appear to be made of gold, but irreducible by Fire into Gold, spiritual and penetrative, strengthning the vital spirits, that they may overcome their enemies. But it must also be endued with this Vertue, that it may change imperfect metals, chiefly Mercury, Lead, and silver into pure gold; not truly like a fixt tincture, tinging with profit the baser metals in flux; but only perfecting particularly in a moist way by digestion, where some part of the metal alone is turned into better. For this tincture of salt or gold is very volatile, so that it cannot resist the fire; but with a gentle heat it melteth like wax, and is sublimed like red salt, soluble in spirit of Wine, that it may be fit for Physical uses.

Also true potable gold being tasted, is neither corrosive, nor astringent like other solutions of gold: neither doth it pollute the hands, the nails and hair with a black or yellow colour, but rather makes them more fine; neither doth it infect copper, tin, lead, with rust or a black colour, but rather makes them more clear; neither is it a body of gold reducible by extraction, nor into white gold, which may recover its former colour by Antimony, and *Aqua Regia*, but it is like an ashy earth, and sublimable in a gentle heat like Arsenick, not enduring the tryal of the cuple, which vertues if it have, it may be called the true Tincture of Gold: but if not, not so, but rather a sophisticated potable gold, not to be medled withal.

Of the medicinal use of this golden Medicine.

We have before demonstrated the sun to be the original of gold, or endued with the incredible vertues of the terrestrial sun. For the strength and vertues of all vegetables, animals and minerals lie hid in it; which cannot be manifested but by a Philosopher, and that by separation, to wit, of the intrinsical and pure parts, from the impure.

This speech will happily seem to thee incredible, or not very likely to say that gold is reducible into a spiritual essence, agreeable to humane nature, endued with the strength of all animals, vegetables and minerals. Surely thou shalt hardly perswade him whom *Vulcan* hath not made a Philosopher to believe it. But who will trouble himself so much as with sure reasons to decide all Controversies, which if possible, yet for many reasons is here omitted; but for sureties sake I will send back the Reader to the second part of our Furnaces, where he shall find how out of Antimony and Sulphur, by a good Chymist, with the help of fire, may be drawn not only the force and faculty of divers vegetables, but also their natural odour; which yet did not appear in them before they were radically dissolved, which if it may be done by any imperfect and fetid mineral, why not also by a perfect and mature mineral?

If we were good naturalists, and very diligent Chymists, then we need not to fill Elaboratories with so many pots and boxes, nor spend so much cost in fetching in so many forreign medicinal species, because without question the strength and properties of all vegetables, animals, and minerals, by an easier way may be found in some few subjects. And as the true tincture of *Sol* well fixed, is endued with all the vertues of all vegetables, animals and minerals; so also deservedly is ascribed to it the force of curing all

diseases; but with a difference. For there are divers kinds of the Gout in hands and feet, as also of the Stone and Leprosie; which sometimes are inveterate and uncurable Diseases, sometimes new and curable. Who therefore, not mad, would promise to cure all and every disease indifferently, by any certain medicine? Certainly no man, although he had the very stone of the Philosophers.

For oft-times the Stone of the Bladder is expelled or cut out, most hard and insoluble by *Aqua-fortis*, which not any medicine not corrosive could dissolve; which strength, although they ascribe to their medicine, yet they cannot perform it. Promises therefore do not suffice, which none can perform: for *Promises become Debts*, which is observed by few; wherefore by the haters of the Art the truth suffers, and the hope of good success of Chymical medicines dyeth. *It is best* therefore *to perform more than promise*, and the work shall praise the workman. How can a Medicine penetrate to the extream parts of the body; to wit, the hands and feet, and dissolve the coagulated matter waxing hard, which out of the Body no corrosive Medicine can dissolve? It is sufficient if a medicine finding a viscous tartareous and salt matter, nor yet coagulated, do dissolve and expel it. The like is to be understood of the stone in the reins, and bladder. In this manner I will ascribe the curing of the Gout in the hands and feet, the stone in the kidneys and bladder, to my tincture of *Sol*, as well in old as young; but so that, if need be, specifical Catharticks may be administred, and extrinsecally Bathes for promoting the cure, whereby Nature may the sooner do its office. But above all things, we must not slight Divine Providence: For ofttimes God smites us with a Disease incurable by Art, unless Divine wrath be first appeased *by humble*

Repentance, which is the best medicine of all. As also the cure of all Diseases coming of the corruption of the Blood, as the Leprosie, the French Disease, and other impurities; which are taken away by this tincture, if withal Catharticks and Diaphoreticks are administred, cleansing and renewing the blood above all other medicines. This Tincture also takes away all the obstructions of the Liver, Spleen, Kidneys, and other parts, because it warms, attenuates, incides, and evacuates the original of divers Diseases. It also cures all violent and acute diseases, as the Epilepsie, Plague, Feavers, *&c.*

It provoketh the Menstrues of old and young, chiefly, if also extrinsically it be rightly administred: which way many are well cured, who otherwise are like to perish miserably; it warms and cleanseth the Matrix above all other Medicines, and renders it fit to perform its office: It preserves it also from all accidents of *Sterility*, and other very grievous Diseases, causing death. It expels the water of the Dropsie by urine, it rarifieth and dryeth up the superfluous moistures of the internal and external parts, like the Sun drying and consuming waters, by which means the body recovers its pristine sanity: of other diseases to write in particular there is no need, because in all and every one, without difference, it may be used as a general Medicine, in old as well as young. This medicine doth not only restore, but also conserve health till the predestinated time.

The Dose is from three grains or drops to twelve or more, but to Children 1, 2, or 3. with its appropriated vehicle, or in wine or beer to be administred daily, which Dose may be taken oftener in a day, respect being had to the sick party.

And so I make an end, hoping to have pleased my

Neighbour: for without doubt, who useth this golden Medicine well, shall do well, chiefly lifting up his heart (acknowledging his sins) to God the Giver and Creator of all good, in filial humility, imploring his help and blessing; which the omnipotent God and merciful Father, that he would bestow on us his temporal blessing in this life with sound health, and hereafter life eternal, of His free grace, *Let us pray, Amen.*

FINIS.

THE
MINERAL WORK:

THE FIRST PART.

Wherein is Taught the Separation of

GOLD

Out of Flints, Sand, Clay, and other Fossiles by the Spirit of Salt, which otherwise cannot be purged. Also a *Panacea* or Universal Antimonial Medicine, and the use thereof. Invented and published in favour of the Studious in the *CHYMICAL ART*.

By John Rudolph Glauber.

A Preface to the Reader.

There will be some without doubt, because the Edition of other Pieces (of which I made mention in some former Tractates a few years past) hath been hitherto by reason of diverse journeys, and other various impediments, neglected, who will think (having no knowledge of me) that I am unable to perform my promise; and there are others, who knowing my Condition, and the Contumelies

of my Enemies, will fear that I being diverted from my purpose by these Reproaches, will make void my secret promises. But I have resolved to stand to my promise, that these men may see that I am neither moved nor altered with the Taunts of the Envious; but that they may be convinced by real demonstration of my secrets; some of which, I shall now for the publick good endeavour to communicate. And although the ingratitude of the World be cause enough for my silence, yet the uprightness of my Heart would not permit me to conceal those things, notwithstanding the malevolent and ungrateful. Beside also the following Reason moved me, because there are some ambitious men, who falsly boast of the knowledge of diverse of my secrets; wherefore, some have been moved to think that mine are not my own, but the Works and Writings of others; by which means I have been deprived of my due Praise, being attributed to another. And this I have often found, that one or other having by entreaties obtained a secret from me, have afterward through Ostentation ascribed it to themselves.

There are others also who fear not to reproach me, and my Writings, as though they were trifles, not attaining their desired end, who (rather than I who have written plain enough) are themselves to be blamed, for being ignorant how to work. Such and other things might deter me, but I would not omit the publishing of these Writings for those mens sake who are pious and honest. Wherefore I openly affirm, that these things published by me are not only no trifles, but most true, and also my own, and not the Invention of another. And I call him a lyer, who shall boast himself the Author without any of my help. But of these enough! yet I would have the Reader know, that for the meaness of the stile, I am not like many Writers, who more look after the flourish of words than the thing it self; I rather seek that my Neighbour may profit by me. Wherefore, for his better

understanding, I had rather be prolixe in words, tedious to delicate ears, than write in obscure brevity adorned with Rhetorical figures. For I know that the studious in the Art do affect a prolixe, plain, and distinct information or instruction, rather than a Ciceronian *or obscure. And now, in the Name of God, I will begin my Work which is most profitable to all, and will faithfully communicate and publish the same in that manner as it was written by me in my travel, under the title of* The Mineral Work*, divided into three parts. In the first of which shall be taught how out of sand and golden flints, corporeal gold may be drawn by the help of Spirit of Salt. Which secret, although it may seem small, yet it is that whereby (a knowledge of the true stones and true sand being obtained) life may be sustained, and also the cost laid out may be recompensed, as shall be proved in the following parts.*

In the second part shall be treated of the original and generation of metals, and also of the destruction of Minerals and Metals.

In the third part shall be demonstrated the possibility of metallicol transmutation by Nature and Art, and that with divers reasons: which demonstration is not (unless I am deceived) performed yet by any, being the foundation of all metallick Philosophy, and the Golden Crown *of all my Writings. Which God grant I may perfect, to the glory of his Divine Name, and the good of my Neighbour.* Amen.

The First Part of the

Mineral Work.

A most profitable process of the separation of Gold out of Flints, Sand, Clay, red and black Talk, and other Fossiles, containing very subtle Gold, thin and spongeous, which otherwise cannot be separated, either for its scarcity, or the obstinacy of the Mineral, by reason of the great Cost to be bestowed; viz. *very easily with the spirit of Salt.*

Know first, (good Reader) that not all Sand, Clay, nor all Flints, and other Fossiles do contain Gold, but only some, without the knowledge of which, this secret availeth nothing. And because the knowledge of these are very necessary for the Artist, I will shew how they are to be proved, whether they contain Gold or not, that he labour not in vain, but that it may prove to his commodity or profit.

The madness of Men, searching after uncertain things is wonderful, but neglecting certain, although exposed to every ones view, for many seeking the perfection of Metals to gain Riches, are busied about an uncertain thing, because of a thousand scarce one obtaines his end: altho' they may be perfected and

purified, I mean imperfect and impure metals, so that good Gold and Silver may thence be extracted, but this Art is given to few, neither is every one fit to perform the business; because it requires an ingenious and experienced ARTIST: But the thing which is certain, may be performed with small cost and labour by any vulgar Chymist, having any knowledge of the Art of fusion and separation, being an ingenious man, and not seeking things too high or too gainful at the first tryal. Be cautious therefore in the extraction of the aforesaid stones, for if thou shouldst with the spirit of Salt extract many of them, having no Gold without doubt thou shalt find no Gold there: And if thou shouldst extract some contained in them, and if thou be ignorant of the separation of it by Antimony, thou canst thence hope for no profit.

First then, the knowledge, *viz.* of those stones is necessary afterward of that separation by Antimony. Impute therefore the fault, if thou errest, not to me, but to thine own ignorance, if thou knowest not to extract the Gold; for I have written clearly, though thou shouldst not know any thing that were omitted. And I before admonish thee to be cautious in thy work, lest thou labour for nought: For it is certain, and no fiction, that in many places there are found golden flints, and golden clay, and sand, oft-times abounding with gold. And if they do not abound with it, yet may they be extracted with profit: but the flints abounding with it are extracted with greater gain. There are also found whole Rocks and Mountains of Gold, and great Mountains filled with golden Sand and Clay, not returning the charge of washing, either for its too great rarefaction or spungiosity and levity, by reason of which, its washed away with the sand; all which, how poor

soever, may be extracted by the spirit of Salt with gain, and by Antimony fixed and purifyed. In brief, this is such a secret, by which, no man can be an impediment to another, as in other mechanical operations, whereof no man may be ashamed; for God did therefore create Gold in the earth and stones, that we may therefore extract it to the glory of His Name, and the benefit of our Neighbour; neither hath he forbidden the true and genuine use of it. I say therefore in truth, that I have here described this Art, how ever despised by the ignorant, yet of greatest moment, and almost incomprehensible. Now consider the thing a little farther, thou shalt find every where in the earth great Treasures to be hidden, which only through ignorance are not discovered. Truly it is known to all, that there is found golden sand and clay in diverse places, which for the aforesaid Reasons are left unlaboured, but by this our Art may easily be worked upon.

There are found also silver Mountains, out of which, silver cannot be extracted for the little weight it yields: there is also found in many places a certain yellow or reddish earth, or such like clay, which though it contain store of silver, yet it cannot be extracted with profit by this way, yet separable, with gain, but not by the spirit of salt, which leaves it untoucht, but by some other thing, every where to be found in plenty, of which, for some reasons we shall speak nothing here.

And this way of separation makes much for the poor mineral of copper, which with profit cannot be worked upon by the vulgar way, to be separated from the Copper, afterward by ripening it into a better metal, or turning it into verdy-grease for want

of a better art, which business also may well and honestly more than maintain a family. This way also may the rejected dross of the gold, silver, and copper be with profit separated. But because I have decreed to handle here only the extraction of gold out of stones, therefore these menstrues which are used in the extraction of copper and silver, are deservedly omitted, and reserved for another place, where sometime they shall be delivered, to wit, if I shall see that this demonstration shall be accepted in mens eyes, which more very excellent shall follow. As now I have undertaken a more excellent matter in love to my countrey, by which it may appear, that *Germany* however reduced to want, is yet rich enough, if it would but at last look upon its hidden treasures. There is no need to offer a fore-chewed bit, for demonstration is sufficient, neither will we obtrude a good upon the negligent; for to the ungrateful the best things are unacceptable. These therefore being waved, in short we will give the demonstration and extraction of those flints, not doubting but the expert and experienced, though the sluggish may not, will thence reap profit, and give God the praise.

What belongs then to the aforesaid stones, out of which gold may be extracted, thus the matter stands. All kind of flints for the most part have invisible gold, sometimes visible and invisible, volatile and corporeal together: but many commonly contain impure iron-like volatile gold, and also mature, and a few, sulphureous and copper-like.

Stones which the *Germans* call *Quartzens* and *Hornstein*, containing pure and corporeal gold, although mixt with silver and copper, may be burnt and ground, and extracted with Mercury, and if they abound with gold, be purged by flux; which labours

are usual with diggers and dealers in metals, of which I do not intend to write, because others have heretofore writ of them. But those flints *Quartzen* and *Hornstein* every where almost to be found, containing but a mean quantity of dispersed iron-like Gold, Marcasite-like, and that either fixt or volatile, cannot be separated with gain, to wit, neither by Mercury nor by Flux, wherefore they are neglected by the Miners, either out of ignorance or for the intolerable costs. But I having tryed those base stones, that how little gold soever they possess; yet may it be separated with great gain, I would not intermit to publish this knowledge for my Christian neighbours sake, not doubting but this publication will be profitable to very many. For I am not ignorant that there are as well learned, as unlearned, noble as ignoble, secular as spiritual, either by war or otherwise exposed to poverty, so that they are hardly able to maintain their family, *&c.* and for their sakes and others in want. I have published this secret, which rightly handled may bring no small gain yearly, but especially where those stones are plentiful, and also that spirit of salt, whereof the description is given in the first part of the Philosophical Furnaces, and hereafter there shall be given a better, if nothing hinder; in the mean while use and enjoy these. And if it happen so that thou canst not rightly perform all things of the aforesaid tractate, blush not to learn the manual Operations [which cannot be so exactly described] from those that are experienced, lest you hereafter unprofitably spend your labour and costs. As for those stones know that very many of them are found in several places, chiefly in those that are sandy and mountainous, but in some more and better than in others: for there is seldom seen sand without flints,

and oft-times the sand it self, though very little doth not want Gold. But they are very likely to be found on the shoars of Rivers, where the waters washing away the sand from the flints they are found in great abundance, though they are not so easily known by their outside, as those which were found clean in the sand, because they are covered with slime. Wherefore they must be broken with a hammer, that that may be seen which is in them, which may better appear if they be burnt, and quencht in cold water. For the stone retaining its whiteness when it is burnt and quencht doth contain nothing; but acquiring a redness it shews there is something in it, and the more red it is the better token it is.

N. B. But this is not to be understood of sandy stones, waxing red in some part, in the fire, containing no gold, but of flints out of which by a mutual percussion fire is brought forth, which the more pure they are the purer gold do they yield. There are also flints out of which fire is forced by percussion being red in the fire, which contain no gold but Iron; which you may know by that clear redness before the burning, which being burnt is changed into an obscure redness, not shining and crude: but the flints containing Gold, being burnt do acquire a fair golden yellowness, or reddish colour, as if they were covered with gold, and that through the whole substance if they be broken in pieces. And these give a pure gold, but those other yield a red extraction like blood, yielding not gold, but the purest and malleable iron, good in Chymick uses, (but chiefly for silver to be cemented and exalted) for gold is seldome to be found in them; the which is well to be observed lest thou draw out iron in stead of gold, and so lose thy labour.

Also the best stones containing gold, are those which are white and shining, here and there throughout having in the whole substance green spots and lines, red, yellow, skie-coloured and brown. There are also black flints out of which fire is forced by percussion, having gold and iron, which may be separated with profit, yielding sometimes plenty of ironish Gold, which may in like manner, be separated of which afterward.

They are very good flints also which being burnt retain a whiteness, with veins green, skie-coloured, and such like, neither are they disesteemed which burnt, have black spots, and not veins.

But the stones (*Quartzen* and *Hornstein*) although they in burning are not altered, yet if there be seen before gold volatile and spiritual, they by separation of themselves yield gold.

Gross and subtle sand having light and yellow gold, yields in the burning a skie-coloured smoak, and is exalted in colour, *viz.* brownish: but that hath nothing which is not altered.

Subtle earth, yellow or red, passing through sand or a mountain like a vein contains also gold, which is for the most part volatile, and not mature, flying away in reduction, having ingress into silver and other metals, and therefore for this reason conservable.

For thy better knowledge thou mayst prove the stones, with white fusile glass, which thing is treated of in the fourth part of the Philosophical Furnaces, that thou mayst not have cause to impute the fault of thy errour to me; therefore I would have thee understand, *viz.* that all stones contain not gold, neither in all is it separable by the spirit of salt: they

are therefore to be known before they be applyed to the work.

Now follows the preparation of flints, and the extraction of the gold contained in them, by the spirit of salt.

First the flints being made red hot in the fire, they must be quencht in cold water, after taken out and cooled, and finely powdered.

N. B. When they are broken in a Mortar the better parts may easily be separated from the baser: for while they are finely powdered, always the best part goes into red powder first, the worser part thicker and harder, containing little or nothing, being left; And if they be coursly powdered and sifted through a fine sieve the more subtle part like red powder goes through the sieve, the unuseful part being left in the sieve like white dust, which may be cast away: and if yet some redness appears, it must again be powdered in a Mortar, and the better part shall go into a red powder, the baser part being left in the sieve hard and white which is to be cast away, but you must observe that not all and every of these flints are thus separable by powdering; for some being beaten do every where retain the same colour, without any separation of the better parts, which you must finely powder and extract in the whole substance, But they (*viz.* those separable) are more easily extracted, because all the gold contained in one pound for the most part may be gathered out of three or four ounces finely powdered and separated in the aforesaid manner; so that it is not needful to extract the whole stone, nor to spend so much spirit of salt. But sand and clay need not such a preparation, but without a preparation being made before, are

extracted by the affusion of the spirit of salt.

℞ then of the flints as aforesaid prepared and separated two, three, four, six pound, to which being put into a cucurbit of glass whole (undivided) pour of the spirit of Salt to the depth of three or four fingers breadth, and place it in hot sand or *Balneo*, that there the spirit of salt may be hot, and may extract the Gold, and so let it continue for five, six or more hours space, until the spirit tinged with a deep redness, can extract no more. And perchance at the first time (though seldom) it may not be tinged with so great a redness, then must you decant that same imperfectly tinged spirit, and pour to other flints after the manner expressed, prepared in another cucurbit, and place it with the flints in a moderate heat for to extract the gold; which done pour it off again, and pour it to fresh flints, and do so often until it hath drawn to it a sufficient quantity of gold; which afterward thou must keep, until thou hast gotten a greater quantity, and all the Gold may be separated at one time from it, as afterward shall be said.

Which done pour to the reserved flints in the first cucurbit, a fresh spirit of salt, and leave that so long in heat, until it be coloured, and extract the gold that is left in the flints, and was not at the first time extracted; which spirit being afterward decanted, pour it to the flints reserved in the second and third cucurbit, to extract the residue of the gold which was left at the first time; and so consequently to the others reserved, until the spirit be sufficiently coloured, and can attract no more; which afterward pour off and put it to the first, which was reserved. You must also pour a fresh spirit to the remainder of the extraction for the extracting of all the gold. At

length pour to it also common water to wash away the tinged spirit of gold remaining in the flints, that none of the Gold may be lost.

And this labour is so long and often to be repeated till there remain neither flints nor spirits; in the mean while you should cast away the flints extracted and washed, that the cucurbits may be filled with fresh flints, and so continue the work; and if there be no more spirit left to continue the extraction, you may then separate the extracted gold from the spirit, which is done as followeth: but first you must have plenty of glass vessels, or retorts of the best earth, which may retain the spirits; which you may so far fill with the impregnated spirit, that the spirit in the abstraction run not over, which done, it is to be extracted in a dry *Balneo* by little and little from the Gold, which spirit ye may use again in the aforesaid work. And the Gold which is left in the bottom of the vessels, is to be separated from the vessels with a crooked iron wier and (kept being very like to red earth) for its use, until thou hast gotten a good quantity, *viz.* so much as sufficeth for separation and purgation (of which afterward) to be made by Antimony.

N. B. But when thou shalt extract red talc with spirit of salt, red or black granates, *Smiris*, or *Lapis Calaminaris*, and other Fossiles, which beside fixt Gold contain much immature and volatile Gold; you must in the abstraction cast in a little iron, *viz.* to the solution, which retains and fixes the gold which otherwise flyes away in fusion. Wherefore those solutions and extractions of Talc and other things containing volatile gold are better extracted out of iron Cucurbits by earthen alembicks than out of glass and earthen retorts, because then that volatile gold

doth attract only so much thence as is sufficient for its fixation; which iron is after easily separated by the Antimony from the gold, as shall after be taught. And this is to be noted, that not the whole granate is soluble in the spirit of salt, although it be long left in digestion, always retaining its former colour; wherefore there is a difference to be made, or a preparation to be learned, requisit for the solution of the gold contained in them.

And you must extract Talc not with too much or excessive heat, lest its substance be totally dissolved in the spirit and be a hinderance to the work; because there is little profit then, for it is therefore appointed, that a little gold dispersed in a great quantity of Talc may be reduced into a little compass that it need not that all the quantity of Talc be made fusile, because it will thereby procure loss. But there is no danger in flints, because the spirit of salt doth not dissolve them as it doth Talc, but only extracts gold from thence, the stony body being left. The *lapis calaminaris* may also otherwise be handled in the extraction and fixation than granates, flints and Talc, because it is almost wholly soluble in the spirit of salt; which work is not here to be handled, because the extraction and fixation is taught in a peculiar way in another place, neither do I mean to treat of it here, but only of the extraction of gold out of flints every where to be found. And this is the way of extraction of Gold out of flints and sand in heat by the spirit of salt, to be done in glass vessels. But there is another way too, which is done in cold without glass vessels, which I thought worth the setting down, that in the aforesaid work you may choose which you please, this or that, and it is done as followeth. We must have in this way store of earthen funnels well burnt, and not sucking up the

spirits; for want of which we must have such as be of strong glass: there must also be a form with many holes in it to receive the aforesaid funnels, under which must be placed glass dishes or basons to receive the strained spirit.

Here follows the work to be performed by Funnels.

The Funnels being put in the holes of the form, you must first put a big piece of *flint* in the straighter part of the Funnel, to which after put lesser pieces, and on these again less, *viz.* as much as serveth to fill the straight part of the Funnel, of which the larger part is after to be filled with powdered flints, but so that there be left a depth of three or four fingers breadth for the spirit of salt. By this means those greater pieces in the lower part will hinder the passage of the fine powder in the Affusion of the Spirit of Salt.

Which being done as it ought, pour to the flints contained in the Funnels the spirit of salt, two or three fingers breadth in deepness, which forthwith shall work on the flints, and attract their gold, and then run into the dish or bason set underneath: and because for the most part at the first time, some of the powder passeth through with the spirit, you must so often pour the same spirits on the flints until there be a stoppage, and the spirit come clear; afterward pour this spirit into the second Funnel with flints; and then into the third, and so consequently, until it be strained through the flints of every Funnel; or till the spirit be sufficiently coloured, which you must keep until you have gotten a sufficient quantity to be distilled by retort for the separating the spirit from the gold. Then that first spirit being strained through the flints of each Funnel according to order and coloured, pour a fresh spirit to the flints of all the

Funnels according to order, beginning at the first, till you come to the last, until that be sufficiently coloured; which being done, pour a fresh spirit of salt to the flints (according to their order) contained in every Funnel. And when you see the strained spirit not to receive a tincture, it's a sign that all the gold is extracted; and then pour on no more spirit but common water, that it may be strained, and the water will attract the spirit of salt left in the flints, that none shall be lost, which acidish water save by its self to the same, and the like uses: which being done, take out the extracted flints, and fill the Funnels with fresh as before, *viz.* to be extracted; and do this so long as you have flints and spirit. But you must not pour a spirit not sufficiently tinged into the spirits that are well coloured and impregnated with gold, but keep it a part, and pour it still to fresh prepared flints, according to order, contained in divers Funnels, *viz.* until it be sufficiently coloured; and being coloured, separate it by the glass retorts with the rest, extracting it from the gold by abstraction; and being abstracted again, use it to a new work like the former. And by this means with 100 pound of spirit of salt may be extracted some thousand pounds of flints prepared, and separate the gold contained in them, which otherwise by fusion cannot be done. But the chief point consisteth in the extraction (the spirit of salt being well and rightly first administred) *viz.* that the spirit may not be wasted, whereby many stones may be abstracted with a little spirit. But this caution is to be observed in this extraction, which is done in cold, that it requireth a stronger spirit of salt than that, which is done in heat by cucurbits, or else the busines goes on slower: but with a stronger spirit by this (the cold) way they are extracted sooner and easier than by

that which is done in heat; and neither so dangerous, laborious or costly: this extraction then, *viz.* the cold, requires a stronger spirit of salt (which is worth noting) than the hot.

And this is that way, by which those golden flints, and other golden fossiles are prepared, and with the spirit of salt are extracted, and by which it is again separated from them: Now shall follow the manner of purification, *viz.* of the Gold left in the Retort.

N. B. The pure gold being extracted out of the flints, not the iron-like, there needs no great business of purification; for thou mayst purify it by fusion with borax, or with the fluxing powder made with the equal weight of nitre and tartar: but if the gold extracted out of Flints be mixt with iron, as for the most part it is, then you must not fuse it with Fluxing Powder, because it is not thereby purifyed or rendered malleable Gold, but separate it by lead, by which way it is purged and made malleable. And if such Gold have any sulphureous impurity mixt besides, it is not to be separated with lead, because it is then partly turned to dross and other impurities by the iron with loss; wherefore it is to be purged with three parts of Antimony and separated; by which means nothing is lost; which is the best way of separation and purification of Gold, *viz.* the ferreous, without which it cannot otherwise be separated without loss.

How impure Gold may be separated and purged by Antimony.

This work is necessary to be known, if you think to have any benefit by the aforesaid extraction of Flints by the spirit of Salt, which without this separation and reduction is of no moment: and what profit I

pray is there by the extraction of immature Gold, which by the common way cannot be purg'd, requiring the industry of the Artist in fusion, whereby it may be separated from its sulphureous fæces and fixed? For it is easie to conjecture, that such spiritual and volatile gold mixed with Iron, by that common flux is not reducible into a body, but rather into dross: for experience testifies that gold dissolved with the spirit of salt, and also iron, or any other sulphureous thing, the spirit of salt being abstracted cannot be reduced whole by the vulgar flux made of Nitre and Tartar, going into dross: which if it happen to corporeal, pure and fixt gold, how shall it be otherwise with that which is incorporeal, unclean and volatile? for the Gold being ironish commonly, which is extracted out of stones, and iron having great affinity with gold (by reason of which being nearly united, it is difficultly separated, so that it easier goes with iron into dross than parted from it) you must of necessity make a flux not only attracting that impure gold, but also purifying and cleansing it, that which Antimony alone doth, which with its combustible fusible Sulphur easily enters that ironish Gold: But by its Mercury it attracteth the pure corporeal gold, and cleanseth it, and separates it from all dross without any loss: wherefore there cannot be a better flux, but requiring industry, or an ingenious separation of the Antimony from the gold, without wasting the gold; which is done as follows.

And first your ferreous gold, that is left in the abstraction of the spirit of salt, must be finely powdered in iron retorts or pots, and mingled with it two or three parts of Antimony powdered, and mixt in a very strong crucible filled and covered, and then fused in our fourth furnace, until that flow like water; which soon appearing, pour them together

into a heated Cone, smeared within with wax, and when they be cold, separate from the dross the *Regulus* (having most of the gold) with a hammer, and keep it by it self. Which done, you must again melt the drossy Antimony (as yet containing much gold) that was left, in the crucible, and add to it a little filing of Iron, mixing them with a crooked wier, and that Antimonial combustible Sulphur will be mortified by adding iron, and will yield a *Regulus* containing the rest of the gold, which, as a regard is had to the quantity of iron added, will be more or less, and for the most part will answer in weight to the weight of the iron; then cast the mass (well flowing) into a Cone heated and smeared on the inside with wax, which being cold, separate again the *Regulus* from the dross with a hammer, which also is to be kept by it self; melt the dross again, as before, and precipitate it with iron, and extract the *Regulus* thence, which keep by its self, for it contains gold and silver mixt. For the best gold is precipitated the first time, but afterward the baser sort, and at last only Silver. Wherefore every *Regulus* is to be kept by it self, that the purest gold may be a part, and the silvered gold by it self.

N. B. And if the Antimony, by the addition of Iron, do lose its fusibility, and therefore can yield no *Regulus*, it's required, that you at every time when precipitation is made, by adding iron, that you do also cast in some *Misy*, to make the mass to melt in the crucible and precipitate the *Regulus*. All the gold and silver being reduced into three or four *Regulus*'s, you must keep the drossy parts by themselves that were left, of which we shall speak hereafter.

Now follows the way of separating the Gold and Silver from the Antimony.

The aforesaid antimonial *Regulus*'s may many waies be purged, and first by help of Bellows on a plain earthen test, as the custom is with Goldsmiths when they make Gold fusile by Antimony, which labour is tedious and dangerous; which cannot be done often without the loss of health, nor in great quantity: wherefore when a better way is known, 'tis a folly to do it so. The *Regulus*'s also may be purified by lead on a teste, which work may be done in a great quantity, but it requires abundance of coals and lead, where the Antimony cannot be preserved: but it may be done with gain, and is to be preferred before the former waies: Thou maist if thou pleasest calcine the aforesaid *Regulus*'s to ashes, and then fuse them; which way the gold and silver may easily be drawn out. Thou maist also fuse them in a crucible, and by the addition of some salts, separate the antimony from the gold and silver, turning the antimony into dross, which being separated, those are found purified and malleable, which though it be the easiest way, it is yet also very dangerous, for the salts often, if you do not warily proceed, do spoyl much gold and silver, and sometimes leave gold immalleable, and so double the pains.

But he who knows how to do this by Nitre only, he may with great gain, and in a short time, purifie a great quantity of the aforesaid *Regulus*'s without loss of the gold, silver, or antimony. There are also other means for the doing of it which to relate were tedious and indeed impossible. Wherefore I will set down the best of all, most profitable in the separations of great quantities of *Regulus*'s. Where first is required some peculiar little Furnace with a Fire almost like to that in our first part of Philosophical Furnaces, built for the subliming of Flowers; it wants indeed a grate, but it hath little

vents for to make the coals burn, that thy antimony separated from the gold, may be sublimated or elevated into sublimatory vessels. Which being rightly built and heated, let so much of the *Regulus* be cast in with a spoon as the Fire can bear, which will quickly melt and be elevated, the air being attracted by the vents, without any trouble: which being sublimed, you may cast in more, if you have more, until all the *Regulus* be separated and sublimated from the gold and silver, which are left in the Fire pure and malleable; the furnace being cold, you may take out the Flowers and keep them (of which afterwards) for uses, which way you may not only separate a great number of *Regulus*'s from gold and silver in a small time, but also keep all the antimony, which may many waies be used in Alchymy and Medicine with great profit. Which sure is an excellent knowledge, for not only hereby may any one get abundantly, without wronging his neighbour, but also help many sick People, *viz.* by that excellent Medicine made of the Flowers: which is a special gift of God, for which we owe immortal Thanks. And this is, of all others that I know, the best way of separation of gold from antimony, which is not only done in great quantity, in a short time, and with small charge, but also without loss of the Antimony.

Here follows the Use of the Antimonial Flowers.

First, you may take the whitest of the Flowers out of the lower hole, and keep them for a Universal Medicine; but reduce the rest (being less pure) into *Regulus* by the salt of Tartar, for divers uses, as shall be said afterward; or you may mingle them with an equal weight of common sulphur, or antimony, which being mixt in a covered crucible, melt them,

and they will yield an antimony like to a natural, good to purifie gold: or thou maist mingle them with other metals or minerals, that by this means they may be made better. Or thou maist use them in Chyrurgery, for they of all stiptick plaisters make the best. In brief, the aforesaid Flowers may many waies be used with good gain and success.

The aforesaid antimonial dross may also be reduced into Flowers, and used in the same manner; which indeed are endowed with as excellent Properties, as they which are made out of *Regulus*'s; because in that fusion and separation of gold extracted out of Flints and Talc, the gold only that was fixt and mature, was separated from the *Regulus*'s, (the immature and volatile being left in the dross) and elevated with the Flowers: It follows thence, that these are better, as well in medicine as in the transmutation of metals.

Or, if thou wilt, add to the antimony (as aforesaid used) old iron, to reduce it in a furnace, and take the *Regulus*, having gold and silver, which may therefore be used in other operations of Chymistry, where there is need of *Regulus*, as we may shew hereafter. But the dross doth yield a *Regulus*, *viz.* in a very strong Fire, and a Furnace with a peculiar separatory by abstraction, which although it contain not gold, yet it may be used not without gain, as if it be mingled with Tin in fusion, it procures to it a hardness and sound, useful for fashioning divers sort of Houshold-stuff, which is not so easily darkened as the common Tin, or if thou wilt not, thou maist make weights of it.

Hitherto we have treated of the extraction of gold out of Flints, and of its putrification by antimony; now we will teach you how to use the rest of the

antimony, as well in the perfection of base metals as in medicine, as well for the preserving of Health, as the curing of Diseases.

But seeing we have made mention of an Universal Medicine, to be made out of antimony aforesaid, I would not have thee think that that is such as can take away all distempers in general, without distinction, which vertue is only ascribed to the Philosophers Stone, but not by me to this medicine; to which I attribute no more than I have tryed: But this in truth I dare affirm, that there is, besides the stone, scarce any comparable to it; for it doth not only preserve the body from divers Diseases, but also happily frees it from the present, so that it may deservedly be termed a *Universal Medicine*.

The Preparation followeth.

℞ of the flowers purified from the dross a pound, *viz.* of Antimony, by which the extracted gold was purified, which for the most part are of a yellow colour, having gold volatile and immature: in defect of which, take the flowers made out of the golden *Regulus*'s, being for the most part white, to which pour in a Glass Vial, strong and long-necked, of spirit of wine tartarised, three or four pound, mingle and stir them well together, and put on it another crooked pipe (within which let there be some ounces of Quicksilver, as is described in the Fifth Part of our Philosophical Furnaces) and make strong the joynts with a bullocks bladder thrice folded, made wet; which dryed, place the glass in *Balneum*, and give fire by degrees, that the spirit of wine with the antimony may digest, in which leave it for 24 hours space, and so soon as the fire is out, take out the glass, when it is cold, pour off the spirit tinged red

from the Flowers, and pour on fresh; and place it, as before, in *Balneum*, to digest 24 hours space, till it be red, and do this the third time, or so often till the Spirit be no more coloured, for then no more is to be poured on, and that which is coloured, is to be filtred with Cap-paper. The rest of the Flowers, after the extraction, as not requisite to this business, are to be either kept by themselves, or thrown away. But the tinged Spirit is to be abstracted out of a glass cucurbit by an alembick, to the half, from the tincture, which distilled spirit may again be used in the same work: but the tincture left in the cucurbit is the medicine, of which mention has been made.

Now mention being made also of tartarised spirit of wine, that I may satisfie the doubtful concerning that I will here also give its description, which is as followeth.

℞. of Tartar 20 or 30 pound, put it in a large coated retort, and place it in sand, and distil the spirit off with a soft heat.

N. B. This work may better and sooner be performed by that instrument of our second Furnace; and because it requires great and large receivers, as being very penetrative, thou maist first apply a tin or copper Serpent to the neck of the retort, instead of a receiver, which is placed in a tub filled with cold water, that the spirits being thereby cooled, may be retained, which afterward you must abstract to the half, out of a glass cucurbit by an alembick: for the other half with the black oyl is unprofitable in this work, and therefore to be taken away. After that, mingle the more subtile part, distilled with half of the *Caput Mortuum*, of the aforesaid Spirit, calcined to a whiteness, and abstract it half again in a gentle *Balneum*, out of a glass cucurbit by an alembick, the

joynts whereof are every where to be well closed, and the calcined Tartar shall receive with it self the stench, together with the Phlegm, only the purer part of the Spirit, and more subtile distilling forth, which is again to be mingled with the other half of the Tartar calcined to a whiteness, and to be rectified by another alembick; the *Caput Mortuum* may again be calcined to take away the fetidness, that it may be used again. And this is that tartarised spirit of wine, with which the aforesaid tincture and essence is extracted, and truly not only this, but of all other metals, which no other can do. And if it were lawful, I would write something more of its wonderful force and vertue which it hath in purifying baser metals, with which it hath a great affinity; for it can separate the pure from the impure, of which more in another place. But when it is to be used in mending of metals, it needs not so much rectification as is required in the extracting of metallick medicines; where you may draw it in plenty out of the dry lees of wine. But there is also another tartarised spirit of wine, which may also be used in this same work, which is made after the following way: Dissolve in a pound of the spirit of wine six ounces of Crystal of Tartar; which solution use in the aforesaid extraction, in the same manner.

Of the Virtues of this Medicine.

This Antimonial Tincture doth, above all other Medicines evacuate vitious humours, and insensibly purgeth impure blood; opens any obstructions of the Liver, Spleen, Reins, and the other vessels, attracting to it all malignities, and leaving no impurities behind it. And because it cleanseth the blood, it cures the Leprosy, French-pox, and itch, and other Diseases

proceeding from the impurity of the blood. By its penetrative and attenuative vertue, it resolves all tartareous humours, and evacuateth them, *viz.* which ingender the Gout, the stone of the Bladder and Reins; but not the Stone perfectly coagulated, only it mitigateth its pain, and hinders its encrease; but being not hardened or coagulated, it attracteth and evacuateth it totally and fundamentally out of all parts; it takes away also all Feavers, and other diseases coming from the superfluity of humours. It gently evacuateth the water between the skin, by siege and urine. In brief, it strengthens and purges the principal parts, and preserves them from all preternatural accidents. It is a most excellent preservative in the time of pestilence, and other contagious diseases; and of them being caught, it is a most absolute remedy, expelling the disease suddenly from the heart, and evacuating it. In few words, 'tis of all others a most excellent Universal Medicine, very profitable to both old and young, and also very safe; but warily to be ministred, by reason of its strength with which it is endued, which is most powerful, for it is as a great fire, which extinguisheth the lesser. Truly a better medicine cannot be desired than this, which is extracted of a very mean thing, in a short space of time, and with very small cost and pains. I ingenuously confess, I never saw its like, which I doubt not to be the best in the World. Wherefore then do we seek any other but this, *viz.* which excels in those things which are desired from the real medicine? But as it is most excellent, yet I am certain, that many deluded people will be offended at it, being prepared out of Antimony, a mean and despised thing, and after a plain way. But 'tis no matter, *For the world will be deceived*, looking after gay things, disrespecting and despising mean

things, when all good things, yea, even when God himself doth rejoice in simplicity, for which, by wicked and proud men he is not sought unto. But this is the effect of sin, by which man is so blinded, that though he know not good, when set before his eyes, yet he is studious of evil.

Of the Use and Dose of this Medicine.

Seeing of all medicines it is the most powerful, it had need be warily used, for a smaller dose is alwaies safer than a greater; which therefore may after be given; the which is to be observed in all diseases of young and old. To children of 2, 3, 4, or 6 months old, against the Worms, Scabs, Feavers, and Epilepsie, you need not give above half a drop with a proper vehicle, which you may repeat three or four times a day: it killeth the Worms, it emptyeth the stomach of evil humours: it refresheth them, and preserves them from scabbiness; and because it evacuateth evil and corrupt humours, it preserveth them from the small pox and measles, *viz.* if it be used every month; but to children of 1, 2, or 3 years old, you may give a drop, and to children of 4 or 5 years old a drop and a half: to young people between 15 and 24 years, may be given 2, 3, or 4 drops. To stronger bodies from 25 to 50 years, 4, 5, 6, or 7 drops. But the dose must be greater or less, with a regard had to the sickness of the patient. And in the Stone and Gout, may be daily administred in wine or beer, *viz.* in the morning fasting, unless the patient be very weak; for then you may give it twice or thrice in a day, and continue this till the cure be perfected; where is to be observed that he must keep a temperate dyet.

In the Leprosy, French-Pox and Scurvy, every

morning may a dose be given, and the disease shall totally be rooted out. Otherwise, *viz.* the strength being too much wasted and weakned, you may give only every other day, *viz.* so long as shall be need.

In the Epilepsie it may be given daily; and also in the Dropsy. In all Feavers, two or three hours before the fit. In the Plague it is to be given presently, and every day to be repeated: but for a preservative to be drunk every week once. In all other internal affects it must be given daily, until the declining of the disease; but afterward by little and little, the medicine is to be used till the disease be fully cured.

In external, as in fresh wounds by a blow, thrust or shot, broken bones, *&c.* every day once; with a necessary extrinsical application of a Plaister. In old Fistulaes and Cancers, it may be used once every day intrinsically and extrinsically, the place affected may be cleansed with Mineral Oyntments. For by this means every inveterate evil, how desperate soever, is throughly cured, and pleasantly, without all pain.

But although this be most precious of all medicines, yet there is a *menstruum* not corrosive, with which not only more easily than with the spirit of wine tartarised, a Universal Medicine may be extracted out of Antimony, and endued with better than the aforesaid vertues; so that for the charge of one royal, in three days time, so much may be gotten as may serve to cure some thousands of men, but also all vegetables, animals, and minerals and metals, are radically dissolved and reduced into their first matter: by which means not only very great Poysons are changed into most wholesome medicines, but also bitter things are deprived of their bitterness: for by it things are so corrected, that they do no more provoke stool and vomit, *viz.* which are very

vehement Catharticks (by nature) being changed into most excellent restoratives. Also fetid things being corrected by it, do acquire a sweet odour. And it doth not only (which seems a wonder) dissolve vegetables, animals and minerals with those things which come of them, but also the very Glasses; wherefore you must alwaies chuse the strongest glasses for digestion and solution, or in the defect of such, the weaker are to be changed every 6 houres. And yet it is not at all altered by those things that it doth reduce and turn into their first matter medicinal, neither in vertue nor colour; for it alwaies keeps the middle place between pure and impure, of which this falls to the bottom, but that swims on the top of the *menstruum*, which may again be used. In brief, it's vertues in preparing medicines cannot be enough praised. But it may be compared with the Mercurial water of *Basilus Valentinus*; and the *Alcahest* of *Paracelsus* and *Helmont*, which I judge to be the *Fire* of the *Maccabees* turned into a thick water under-ground. It is a perpetual fire, but not alwaies burning visibly; it is a water permanent, not wetting the hands, the Sope of the Wise, the Philosophers *Azoth*, and the Royal-Bath.

Which Menstrue though I have known some years, and have often used it with metallicks, and by it have found out many secrets, yet I never thought of its use in Physick, until being askt of one who was a great Student of *Helmont*, whether I knew the preparation of the liquor *Alcahast* of *Paracelsus*; and naming some of the vertues of this liquor in preparing Medicines, I began to bethink my self, and I observed that it was my *secret Balneum*, that purifies minerals. Wherefore I presently made tryal with vegetables and animals (for I knew the Vertues thereof in metallicks) and I found wonderful and

astonishing things in it, which before were incredible to me. I affirm and confess therefore sincerely, that all and every the invented medicines published by others and my self, how rare and costly soever, are most mean things in my estimation. For this *Universal Key* was wanting to us. For our vegetables and minerals, however by art macerated, cannot be perfectly resolved, and therefore we hitherto have had but part of their vertues. But now we need not much art, labour and cost, to reduce a whole body without corrosives, into the first matter, like in shape to some clear and excellent water, of its own accord casting forth its superfluous terrestreity, and becoming a most wholesome medicine, consisting of the three purest principles; the which cannot be done without this *menstruum*. For, What else could Physicians extract out of herbs than Syrups, Electuaries, Conserves and Waters? With which Preparations they were not amended, but only qualified with the addition of Sugar or Honey, because there is no separation made of the pure from the impure, or good from bad. For all are left mixt together in the Electuaries and Conserves, but in the Syrups and Waters distilled there is only some part. Extracts indeed by the spirit of Wine are not to be disesteemed, if rightly prepared, but they are no better than their simples; and besides, want that which the spirit of wine cannot draw out, which remainder, though being calcined for the drawing out the salt, which is mingled with the extract, yet that is not of much moment, for fire destroyeth the vertue of herbs, so that fixed salts, as crystallised, do perform nothing in medicine, those excepted which without combustion are made out of the juice of herbs, of which in the third part of our Furnaces Philosophical. But none dares extract the most strong

or efficacious sort of herbs for medicine, because they in preparation are not corrected or amended.

But by this means the most strong Herbs, which without this Preparation are poysons, are matured and purified by the liquor *Alcahest*; so that they may safely be taken against most grievous Diseases. For God did not create these herbs in vain, as some think, which he purposely created that his wonderful works might appear, and that it is possible to take away the Curse from them by a man, being freed from the malediction by the regeneration through Christ. See *Opium*, Mandrake, Henbane, Hemlock, and other stupifying things, how deadly they are, being cautiously used; which corrected by this Menstrue, become most safe and excellent medicines. How dangerous is spurge, scamony, hellebor, gambugium, and other strong purgers (being administred unwarily) no man is ignorant: all which are by this way corrected, and changed into most wholesome medicaments. Who, I pray, dares eat Wolfsbane, and poysonous Toad-stools, and other venomous vegetables? which are all so corrected by the liquor *Alcahest*, as that not only they are not poysonous, but are also turned into most safe and wholsome medicines of many diseases, *Nux vomica*, Levant-berries, and other things that disturb the Brain, are by this means made wholsome; also poysonous Animals, as Spiders, Toads, Serpents, Vipers, *&c.* are by it corrected, as that not only they are not poysonous, but do resist and expel poyson.

N. B. Consider the Spiders signed with the cross, who change their skin every month, and renew themselves, which the Serpents and halcion do but once a year. How great the vertue of worms, earthy and crude, *&c.* is in resolving tartarous humours, and

the French Disease, many know; What then will they do, being corrected with this Menstrue? The *Cantharides* and *Millipedes* are also so corrected, that they may more safely be used in provoking Urine. And if that most venomous Basilisk, of which there are so many fables, whose sight only kills men (which according to the letter is false) could be had, he might be changed into medicine by the liquor *Alcahest*; as that mineral Basilisk, Gun-powder may be; which in a moment kills innumerable men; also Arsenick, Orpiment, Kobolt, and the like; so that they be deprived of their malignity, and be reduced into very excellent medicines. In brief, its excellent vertues which it manifests in correcting of venomous simples cannot be sufficiently described. Wherefore it's worth our pains to search it with all our power, that we may prepare admirable medicines, that the sick may not for the future be so vexed with those tedious and bitter cups. Truly I cannot enough admire its great vertues, which have been hid so long. It is not a corrosive thing, and yet dissolves every thing, but some things sooner than others. It changeth and amendeth their natural vertues; wherefore it may be the comfort of Spagyrists, having a long time sought for rare medicines, *viz.* being that by which vegetables are separated and corrected, and also animals and minerals. Wherefore all conscientious Physicians may have commended to them the Preparation of this universal Menstrue, by the help whereof to prepare their medicines; of which the original and preparation is vile, but its vertues most efficacious, the finding out and uses abstruse. Wherefore it is not obtained, but from God, *from whom proceeds every good gift.* Do not think then that gluttony and drunkenness, idleness, pride, and lying, the contempt of thy neighbour, malice,

avarice, with an impious life, to be the means by which it is to be obtained, for it is only *the gift of the merciful God*, *viz.* this Menstrue, the gate and key of which is only Divine mercy. But that thou maist know what is to be determined concerning medicines prepared out of poysonous simples, I will in brief expound that by example; for all vegetables, animals, and minerals, called poysons, making war with humane nature being intrinsically used, and therefore not undeservedly shunn'd of all, are like some powerful unvanquishable enemy, with all his power seeking the oppression and destruction of his contrary, who being checked by a mediator of no less strength, and reconciled with his contrary, does no more (being unable before the reconciliation to resist his powerful enemies) fear the contrariety of his enemy, which now is made his friend, bringing aid for the exstirpating and vanquishing of all such-like (otherwise) invincible enemies. Even so is it with venomous vegetables, animals, and minerals, destructive to humane nature: which by the liquor *Alkahest* (a checker and reconciler) are so corrected and reduced, that they hurt not, being deprived of their malignity and made friends with men: whereby they are not longer poysonous enemies, but very safe and wholsome remedies, agreeing to humane nature, overcoming and expelling other the like enemies otherwise poysonous and invincible, for by how much the more enemy before reconciliation it was, by so much the more help is brought by it, the reconciliation being made. There is not the like found in nature, which can so suddenly correct Poysons, and reduce them into their first matter, and bring them into very wholsome essences. Let religious Physicians then that can, get this. And so I end this declaration (not without cause set down)

which will move those hearts which are not as yet hardened. This certainly is a true Philosophical correction, with which that which is malign is turned into a wholsome substance. What profits that correction, I pray, which is made by the admixtion of other things, as in the mixture of Catharticks and Cordials? Truly nothing, neither can the Cordials do any thing but debilitate the Catharticks; for nature is not at once able to expel a purging poyson, and attract a thing confortative and corroborative: For a Purge being given, forthwith that shews its strength in the body, whose malignity nature resisting, desireth to expel it, before that it can attract the confortative; wherefore that friend is expelled, together with the disease. The same happens in the mixture of sugar, honey, and other sweet things with bitter, sharp, and tart, *&c.* whose unpleasantness is not corrected by sweet things, but only dulled, thereby acquiring another smell and taste, without any other essential alteration. Which correction is like to that which is made in Taverns, amending the air with sweet fumes, which before was infected with the spittings, spewings, and stinks of rustick drunkards, which is to rusticks an excellent correction, attracting the ill as well as the good aromatick odour, being by drunkenness deprived of their judgment, but not so to sober men enjoying the use of Understanding, to whom that seems a rustick correction. In this manner (not to be commended) are at this day simples corrected. But a true and Philosophical correction is done by it self, without the addition of other things, by benefit of the fire only, as well actual as potentially moist, by ripening, mending, and separating the malignity; which is done by the liquor *Alcahest*; as it is called by *Paracelsus* and *Helmont*.

But whether this my liquor be the same *Alcahest* of *Paracelsus* and *Helmont*, it matters not if it perform the same things.

Fire, and a fiery vertue may do much, but not by burning and destroying, but by maturation and nutrition; and feeding and moistening. Of which moist Fire, see *Artephius*, *Bernhardus*, *Basilius*, *Paracelsus*, &c. for maturation is not done with cold things, but hot, promoting germination. And what ever Nature hath left imperfect in the vegetable, mineral, and animal kingdom, *viz.* accidentally; that may be amended by Art with the liquor *Alkahest*, which is the best way of correction, until by benefit of art, and the help of nature, some better thing be found out, *&c.*

And these are the vertues of that wonderful liquor *Alkahest*, which is made use of in the preparation of medicines: And, because it is said before that it shews its vertues on metallicks also, I could not conceal them from the studious. But all its vertues shall not here be related, for it is endued with so many, that no mortal is able to number them. As for me, although by divine favour and the instruction of that excellent man *Paracelsus* (excellently in a certain place, but observed but by few; describing it, speaking of it briefly, but very plainly and clearly naming it) I did obtain the knowledge thereof, which afterward daily I did more and more encrease, so that I could hardly believe that any ever had spent so much money and pains in the searching of its vertues, for the trying of metals: yet I must needs confess, although happily I have made more tryal therein than any other; that many of its vertues are as yet unknown to me. Seeing then that its vertues and strength cannot all be tryed by any man, by

reason of his short life, although searching an hundred years; and that by our merciful Father only to a few, and but part of the knowledge of its wonderful and incredible force, is granted, to the glory of His Divine Name, in favour of the poor sick, which none, how learned soever, with his ambitious learning and craft could ever obtain. Therefore some excellent gifts being given from the Father of lights, the Omnipotent GOD, to some of His Children, *gratis*, and out of meer mercy, *viz.* for some causes, I easily believe, that it is not His Will that it shall long be kept close, but be revealed to the world, to the glory of His Name, and the benefit of our poor neighbour. Wherefore I could not longer hold my peace, hiding my talent which I received *gratis*, though small, but communicate it *gratis* to my neighbour; but so that the Divine mystery may not be gotten by those ungodly abusers, but only by the worthy through divine favour. I affirm therefore expresly, that in whole nature such a thing may not be found; for not only by its help all animals, vegetables and minerals may be reduced into very excellent and safe medicines, but also be brought into the first matter; minerals and metals may be purified, washed and fixed, and so changed into better bodies. That which is worthy admiration, that in so vile and mean a subject should lye hid so great vertues, by which alone without any other art, may be acquired riches and honours, and lost health. Than which thing, what doth mortal man more need in his misery, besides the Divine Word, the comfort of the soul, than for necessary sustentation of life, soundness of body, and honest report before God and men? All these things may be had with this subject, so that one need not to involve himself into any other troublesome art or vanity of this world, having this

secret, whereby all necessaries may in abundance be procured: of which gift that this unclean world is unworthy, I do affirm sincerely, because it swells with ambition and avarice; for which we are not able to give God the Donor sufficient thanks in our whole life, wherefore I would have all what state or order soever earnestly admonished, that they do not use this gift from Heaven to the destruction of their souls, but in thankfulness to Him that gave it, and every way to the good of their Christian Neighbour.

Now follow the Vertues which it manifesteth in Metallicks.

First, it (*viz.*) the Philosophical Menstrue, doth radically dissolve all minerals and metals without noise, and reduces them into very safe and wholsome medicines. Out of gold it makes potable gold; out of silver potable silver, and so consequently of other potable metals; so that it may well be called *The Universal Mercury*.

Secondly, This secret Menstrue purgeth, washeth, and transmuteth minerals and metals to a more noble species; wherefore it may well be called *Sapo Sapientum*, by which the saying of the Philosophers is confirmed; *Ignis & Azoth abluunt Latonem*.

Thirdly, By it all minerals and metals are matured and fixed, so as that afterward the immature gold or silver incorporated with them, may by cupellation be drawn out with gain; wherefore 'tis deservedly compared to *Hermes* seal.

Fourthly, It makes metals volatile, and radically conjoyns them that they abide together, and one act on the other in the fire; it destroys and revives, kills and renews; wherefore it is compared to the Phenix.

Fifthly, It separates metals without any loss, and that speedily; but after another manner than corrosives, so that each of them may be had by themselves. For Example: Being about to separate gold, silver, copper, iron, tin, lead mixt; one, or two, three, or four of them mixt, that they may appear each by themselves, without the loss of any, you need not cupellate the mixture with lead, which way only gold and silver are gotten out, with the loss of all the rest: but by this way they are all preserved, where by turns, one after another, they are extracted wonderfully and swiftly, in half an hours time, by this sharp *Vinegar of the Philosophers*, &c.

Sixthly, By it metals may suddenly be mortified and reduced into transparent glass, irreducible, and like *Amausa*, but reserving the propriety and nature of every metal: which in the reduction of Gold do give perfect silver; whereby is confirmed that saying of the Philosophers, *The corruption of one thing is the generation of another*; and that of *Paracelsus*, *Ex aliquo fiat nihilum, & ex nihilo aliquid*. But this incombustible water, or permanent water, shews the truth of the Philosophers writings, generally mentioning it. In it the solution, putrefaction, distillation, sublimation, circulation, ascension, descension, cohobation, inceration, calcination, coagulation, fixation and fermentation, *&c.* in their work to be done at one time and one way: In which only operation all the colours appear of which the Philosophers make mention; as the head of the crow, virgins milk, dragons blood, peacocks tayls, green and red lyon, *&c.* There is also by it demonstrated the truth (by the liquor *Alkahest*) of that Hermetical saying, *That which is above, is as that which is beneath*, &c. and many other things are performed by its help, as making that secret Sandivogian *Chalybs*; also that long

sought-for oyl of Talc.

So far (courteous Reader) hath come my Experience; neither doubt I, but by it to obtain that universal *Salamander* which lives in the fire.

These things which I write are true, and no fallacies. And though this secret be incredible to the ignorant, for the wonderful vertues it sheweth in the preparation of medicines, I would willingly publish it to the World for publick good, but on consideration I held it not meet to communicate it for certain causes. But only lest the knowledge of it should perish, and that the true (and almost extinct) medicine for the curing of diseases vulgarly incurable, might flourish, I have revealed this secret *menstruum* to two friends, *viz.* its preparation and use. [See the preparation in *Mirac. Mundi*, and *Apology against Farner*.]

But do thou not think, because I write of these high things, that I do intend to make common the Secret to all in general; not so, but I endeavour to confirm him that seeketh, and give him occasion to Search this secret deeper; which being found, he shall not only find the truth of my words, but he shall daily by exercise obtain far greater things than these.

And because I have never aspired after vain riches and honours, nor never desire them; I might well be perswaded to leave to others, as yet not hating the wicked World, my troublesome labours, because in this my painful age such tedious labours are very burdensome; besides Philosophy hath pointed me another way, so that what I am able I have determined to abstain from these vanities, and to seek a perpetual good, the life of rest; but my counsel shall not be wanting to those that seek it: for besides moved with the former reasons, also seeing

innumerable many vain philosophers, as well learned as unlearned, uncessantly working, and losing their time and labour, and at last despairing, are perswaded that there is no truth in the Philosophers writings, but to be all filled with lyes and deceits; whence royal Chymistry is disgraced.

But this *menstruum* sufficeth to defend the writings of the Philosophers, without the metallick transmutations; so that I verily believe the time to be near, when the Omnipotent GOD, before He judge the World by fire, will shew His omnipotency to the Nations, by the revelation of the wonderful and incredible things of nature; of which, transmutation of metals is not the least, which in the third part of this Mineral Work I shall deliver to the last age, (being acceptable to God) to the profit of my neighbor, and for demonstration sake. Wherefore I now pass over such things, with a firm hope, that this faithful Admonition shall be received as an undoubted and infallible truth.

How the aforesaid Regulus *of the flowers and dross of Antimony, is to be used in the bettering of course Metals, shall be shewn, that ART may not be abused.*

The Antimonial *Regulus*, a radical metallick humour, may help to perform wonderful things, for being reduced to a water without a corrosive, it resolveth all metals, cleanseth, washeth, and purifieth them, and turns them into a better species, so that particularly not a small gain may be from thence received. But how it may be reduced into water, and how by its help metals may be resolved, volatilized, and again fixed, hath been demonstrated by *Artephius*, *Basilius* and *Paracelsus*; wherefore we need

not here repeat their writings, but refer the Reader to their works.

But not only the *Regulus*, but also all Antimony may many waies be used in the separation of metals, *viz.* For the extraction of hidden Gold, which not be done without Antimony; as shall appear by the following example. When you find a marcasit or other ironish fossile, that will not yield to the tryal by lead, add to it three parts of Antimony, and being well mixt, melt them in a covered crucible, and being melted, pour it into a cone; and when all is cold, separate the *Regulus*, which purge again by fire as before, and thou shalt find gold contained in the aforesaid fossile: And if it be indued with more plenty of gold, for it is not all drawn out at one time, *viz.* with the first *Regulus*, another *Regulus* is to be melted, by adding more iron and salt-petre, which is also of a nature near to *Sol*. And if these marcasit fossiles are not ferreous, you must in the first fusion, add iron and nitre to them, or else they yield no *Regulus*. By the adding more scales of iron, more *Regulus* is made, and for the same use as that is, of which above in the fusion and separation of extracted gold; weights also may be made out of the dross. And thus are *lapis calaminaris*, marcasit, kobolt, zink, talc, and other fossiles separated, *viz.* containing gold.

But all gold containing iron (as that of Stiria, Carinthia, the Granacia, and of Transylvania *&c.*) may this way be easily separated with profit, by the help of iron. And if the iron have no gold, yet if the Antimony have it, it may thence be separated by fusion with iron, *viz.* if it be brought to a *Regulus*. The rest of the Antimony may again be fused with new iron and new glass of more weight than it, but

less than this, and be reduced into a *Regulus* fit for the following uses. Out of the dross let weights (that nothing may be lost) be made, that thou maist have the more gain; as may appear from the following example.

When you have the Antimony, a hundred of which contains two duckats, if you will separate the gold; take a hundred [weight] divided into three or four parts, fuse it according to art, adding a little iron and salt of ashes, and reduce them into small *Regulus*'s, weighing a pound or two. Then melt the dross with half the weights of the iron in a large and strong crucible, and thou shalt have more *Regulus*'s about fifty pound or more, dross 40 *lib.* which make weights of, or else guns, *&c.* the rest, about eight or nine pounds, will vanish into smoak. And so thou hast reduced the gold contained in a hundred weight, into one or two pounds, which thou maist sublime by fire into flowers (leaving the gold in the fire) for its uses, but those 50 or 60 pounds of the *Regulus*'s prepared by adding much iron, they having little or no gold, you may mingle with tin for its beauty, hardness and sounding, to make divers sorts of houshold-stuff, as platters, dishes, *&c.* for tin mixt with the *Regulus* looks like silver for whiteness and hardness, and sounds like it, nor is it so easily dulled as unmixt.

Now let us weigh what gain may come from the separation of the meanest Antimony. Put case that a hundred weight of Antimony be sold for three Royals (for so for the most part the Polonian is sold, than which, although that of *Hungaria* and *Transilvania* be dearer, yet this hath more gold) to which add 60 pound of iron, which is sold for half a royal, and the charge of coals and crucibles requisite be half a royal

more: the total of the expences is four royals, for which take two duckats in gold, sixty pound of *Regulus*, eighty pound of dross, and one or two pound of flowers. Those 60 *lib.* of *Regulus* may be sold at the price of tin, whereof a pound is sold for a quarter of a royal, and then their whole price is fifteen royals. Then the eighty pound of refuse made into weights, may be sold at forty shillings, or at least twenty four shillings, or half a royal; and all things being considered and reckoned, as they ought, there may remain the value of sixteen royals.

And though the Antimony should yield but one duckat, and a pound of *Regulus* should be sold at the eighth part of a royal, yet the remainder would be above six royals: And in a day there may easily be two hundred weight separated by two men. And then suppose it should contain no gold (as some Antimony doth not) yet may four or five royals be gotten daily.

But when you have Antimony, one hundred whereof contains three, four, or five duckats, and iron requisite to the separation containing one or two ducats, then there is so much more gained. Then let him that undertakes this business seek for the best Antimony and iron, and he may well gain in a day twenty, thirty, and sometimes sixty royals.

N. B. And if you should have so much *Regulus* that you could not mix all of it with tin, for want thereof, then it may be sold in parcels, so that one ℔ may go at a fourth part of a royal; by which means the daily gain may not be diminished, but may be rather encreased; as may be seen by what follows. The *Regulus* of Antimony is the masculine species of Lead; whose first being is gold impure and immature: but the first being of common Lead is impure and immature Silver; as experience witnesses; for

Antimony being purged and fixt, yields gold, but the common lead only silver. And because Antimony, which is better than common Lead, is called the *Philosophers lead,* or their *secret lead*; of many so named, but known of few; not that the thing is unknown, or of an unknown original, but by reason of its hidden proprieties; therefore I say that its vertues are not all to be known by any mortal, though he should have a hundred years to search into wonderful nature, for it is unsearchable, and the creator of all wonders, let him injoyn himself silence, neither let him glory in the knowledge of it, who hath not made tryal of it; for in it, through it, and by it, Nature and Art do strive for perfection. Of which more elsewhere.

Now follows the Use.

Having mentioned *Antimonial Regulus*, which is Lead and better than the common. It must also purify impure metals, wash them, separate the occult Gold and Silver in them; that which the common Lead can do, to which, if those be added, it attracteth the more impure part in the Cupel, which it converteth into dross, and draweth down with it into the porous ashes, leaving the purer Gold and Silver in the Cupel: but from some Tin and Copper not yielding to the Lead, nor willing to be washed by it, it cannot extract their Gold and Silver; neither hath any one written the way of separation by it. *Lazarus Erker* indeed hath described (and others also) the way of separating Silver from Tin and Iron, which is not to be disesteemed if it be accidentally mixed with Silver, which is separable that way, but not so, being generated in, and radically mixt with them, requiring other Lead, willingly embracing Tin and Iron, which nothing but *Regulus* can perform.

But seeing Tin and Iron do for the most part, contain much Gold (but chiefly Tin) *viz.* inseparable by the common way, it will be worth our pains to seek another Lead and way of separation; as it is apparent to Refiners, proving Tin and Iron by the common way on a test; whilst Tin and Iron melted in the Lead, do forthwith shew their stubbornness by innate proprieties and forsake it, *viz.* as a contrary rising to the top like dross or ashes, without any separation, Gold and Silver being excepted, if accidentally mixt together, which are left with the Lead; but not so being hid in their middle or center. But that the truth hereof may appear, I will demonstrate it by example: Place on a test under a tyle 16. parts of Lead, and one of Tin, after the manner of proofs, give a fusing fire for to separate the dross; and all the Tin almost flying away, will at the bottom be burnt, and separated like ashes, being sublimated on the top of the Lead; not deprived of its Gold and Silver incorporated together, which afterward I shall demonstrate, when all the Tin is sublimated from the Lead, and calcined, and the test taken from under the tyle, and the rest of the Lead poured off, and you shall find after cupellation no more Silver than the sixteen parts of Lead did contain before, if they had been cupelled without Tin; sometimes less, Some part being taken away by the Tin in the examination: the same is done with Iron, altho' thou shouldst add Copper with glass of Lead, to retain the Tin and Iron, thereby to separate their Gold and Silver, you would effect nothing: for although some more Silver may hereby be extracted, yet that would not come from the Tin or Iron, but from the Copper: it may therefore be extracted another way, of which, hereafter.

In the mean while I will prove clearly, that the

separation of tin and iron by common lead, thereby to get their gold and silver, is of no value, which being left in them, are turned into ashes and dross.

Take any tin, and reduce it into ashes by lead, or agitation, on a smooth earthen vessel (tryed before, by the common way, for distinction sake, which calcine well, that the corporeal tin powdered, may be calcined, or being melted, may be separated from the ashes). Then take of these ashes one part, and of the following flux, or of that a little after six parts or more; being mixt, fuse them in a strong crucible with a strong fire, until the Flux have Consumed or drunk up all the calx of the Tin, and of them both shall be made one, *viz.* yellow or red Glass, which may be tryed with a crooked wier put in: which if it seem not clear, the crucible must be covered again, and a greater Fire be given, until the Fire be perfect; which labour in one half hour is finished: which done, pour it into a brass mortar, afterward to be covered, until it be a cold, that it leap not out and be lost.

Afterward powder it, which with calx of Tin, mix the equal weight of filings of Iron; being mixt, put them into a strong Crucible (because the Flux is very penetrative) covered, and give a strong fire for fusion half an hour: which done, pour it out, for the Tin hath made separation, and reduced some part of the Lead out of the Flux, sinking to the bottom to be separated when it is cold, to be reduced into dross on a test, and then to be cupelled, and you shall find grain Gold drawn from Tin without Silver. And if before you weigh the calx of Tin by the lesser Hundred weight, and after that the grains of Gold, you may easily conjecture how much Gold is contained in the whole hundred weight of Tin ashes, *viz.* at the least 3, 4, 5, or 6. *Lotones*, or *half Ounces*, if

thou work aright.

See then the Fault is not to be imputed to the metals, but us, being ignorant of the separation of the Gold and Silver.

You should not perswade your self by this means to get much wealth out of Tin; for I have not written this for that end, but only to demonstrate the possibility. And if thou think that Gold will come out of Iron by the fluxing powder, mingle then filings of Iron with the Flux, before thou put in the calx of Tin, and thou shalt find in so doing, that Gold doth come neither from the Flux or Iron, but out of Tin; then being hereby assured, that 'tis the Tin which contains Gold, thou mayst consider, how most conveniently that may be extracted, *viz.* with other Lead, and another way, as shall be hereafter taught. Neither think that Tin contains no more Gold than you have heard; for more there is if you can wisely extract it: neither do I deny, that more Gold may be extracted out of the Tin, but more care than this is to be given, if you desire more plenty. But Gold may thence be extracted, not only by Flux, but diverse other wayes, in diverse weights; for what is written, is only for demonstration of the possibility, that the Gold contained in the imperfect metals, may be extracted by a secret separation.

The Fluxing Powder requisite to this Work.

℞ one part of very pure and white Sand, or Flints, having no Gold fusible; to which, add three parts of Litharge of Lead; being mixt, fuse in a very strong Fire, that thereof a transparent Glass may be made of it, which pour out, that it may be cold, and reduce it to powder; which use in the aforesaid manner. But you may ask, why Sand and Flints are mingled,

seeing they are not of a metallick nature: to which I say, the calx of Tin, cannot, as also other Fossiles be Examined by Lead alone, for the following Reasons, *viz.* because in the Calcination of Tin, its metallick nature is hidden, but the impure and earthy parts are manifest, wherefore it hath no longer affinity with Lead and other metals; unless the hidden parts of the lead be manifest, and also other metals and the manifest be hidden, for then they easily embrace one the other, and are again mingled well, and not altered.

What belongs to the alteration of other metals doth not belong hither; for to this place only pertain Lead and Tin, the alteration of which is demonstrated by this tryal; whereby it appears to be thus.

Lead reduced into ashes, by it self, or into Litharge, and deprived of its metallick form, cannot so in this work be used without the flints or sand, for the following reason. The lead and glass thereof made by it self is very fusible and volatile; but the calx of tin is very difficultly fused: which two calxes, although they should be mingled to fuse in a crucible, yet would not be mingled, nor being fused, embrace one the other, by reason of the difference of their fusibility; because the calx of lead alone being fused by a small fire, will perforate and penetrate the crucible, the calx of Tin being left in the crucible: wherefore you must add sand or flints to the lead, *viz.* to hinder its fusibility, that it may endure the same degree of heat with those that are difficultly fused, and further their flux. For like things do mutually affect and embrace each other; as water doth water, oyl oyl, and glass glass; and metals other metals; but water is not mingled with oyl; neither are glasses mingled with metals, but metals with metals,

and glass with glass, whether it be made of metals or out of sand. Wherefore they greatly err who mingle the calx of metals difficultly miscible, or other hard things with lead to prove or examin, not considering that corporeal lead hath no affinity with them: who remaining in their errour, and not weighing the thing further, consequently can find nothing of any moment.

But when the calx of metals united with lead by a *medium*, as flints or sand, are brought together into transparent glass; then the lead being precipitated and separated from the mixture, it cannot be, but that the gold and silver contained in them must be carried away with it. This is a true and philosophical tryal, and not to be contemned, for many things may be by it performed.

N. B. But this is not to be passed by, that in the mutual mixture and fusion of the glass of lead and the calx of tin, and other hard metals, one may easily err, *viz.* in the precipitation (which is done with the mixture of iron) of the gold with the lead into *Regulus*, by either the excess or defect, so that nothing may be gotten, which is committed in precipitation. For if the mixture stand long in the fire not fused, it is burnt, so that it cannot well be separated, and if it stand too long fused in the fire, the gold is attracted by the dross, by reason of the mixture of the iron, having great affinity with the gold, so that by this means nothing can be gotten: wherefore the Work is to be done warily, and with wisdom and industry. You must have a care you burn not the *Regulus* of lead with too much fire, when you reduce it into dross; for fear of attracting the gold from the iron, and turning it into dross. And although this may by Art be prevented, yet we must

not presently create every one *Master of Arts*, it requiring diligence and daily exercise, besides the reading of Books. But this Secret shall other where be communicated.

This admonition then I give, that thou do not impute thy errour (if thou dost err) to me, but to thy self, for what I have written is true: and do not thence infer an impossibility of attracting gold by iron, out of lead, and of turning it into dross, which is no wonder to me, though it may so seem to thee. Which he who hath the knowledge of metals will himself easily perceive. But that thou maist be certain, try the certainty after the following manner: Take two hundred *lib.* of lead, of the lesser weight of the Refiners, put it on a test under a tyle; add eight or ten *lotons* of pure gold, of tin two or three *l.* six or eight of iron, *viz.* of the lesser weight: make them flow together an hour to make dross; as Examiners use to do; then pour it out, and separate the lead from the dross, *viz.* to cupel that which is separated, then weigh the grains of gold left, and thou shalt find half of it consumed by the dross. If this happen to corporeal gold and fixt, How will it be with that which is newly extracted out of an imperfect metal? Therefore you must diligently search out the natures of metals, and then such cases will not seem incredible.

From hence then, and other Examples mentioned it appears, that that separation which is done by tests and cupels, is not true and legitimate; and consequently, that another profitable separation of metals is to be sought; because by this the greater part of gold and silver burns into dross, witness Experience, for which cause the former example was alleadged; whither belongs the proof, *viz.* how much

gold the dross hath attracted, which is done as followeth: ℞ the remaining black dross, to which add a double weight of salt of tartar, put it in a crucible filled but to the half (for fear of boyling out) and covered, that nothing fall in, under a tile or among live coals, one or two hours space to digest; and a new *Regulus* of lead shall be precipitated, which separated from the dross, you may cupel, and you shall find new grains of gold attracted by the iron in the dross, and now separated by the salt of tartar, overcoming the force of the iron. And so you have heard from two examples, how in the coction of the separation gold may be drawn out of the lead by tin and iron, and that therefore there is need, that gold be separated by the *Antimonial Regulus* out of the aforesaid metals, and not by lead, if you would extract the true substance with gain.

N. B. Gold may likewise be separated out of the glass of lead (being first dissolved with the ashes of tin) with coal dust, adding it in the flux and stirring it with an iron wier; and also with common sulphur, by burning it on it: but the aforesaid way with iron, is to be preferred before those two which spoyl the gold, *&c.* wherefore the remaining dross is to be gathered, which by some abstracting furnace by other means may be tryed, for to recover the spoyled or lost gold and silver.

And all these are alleadged to demonstrate that the gold in tin and iron is to be separated by the *Antimonial Regulus*, and not by Lead. But how this separation may be perfected, you shall hear in the third part, where we will treat of lead, explained by *Paracelsus*, in his book called *Cœlum Philosophorum*, and other artificial Chymical labours: wherefore here we omit it, being superfluous to handle one thing in

divers places. In the mean while exercise thy self in lesser things, that thou maist be more fit for greater when they shall be set forth. But wonder not at my liberality in publishing so great secrets, for I have reasons for it. Such a burden is too much for me alone, neither doth it profit the Covetous to sell his goods to them which keep not their words, nor pay the money, after they have obtained their art, which hath hapned to me. Wherefore I have determined to communicate some secrets to all the world indifferently, that the poor may receive some profit by them; knowing that though I write plainly, yet that all will not at the first view obtain their desires. For some are so dull, that they cannot imitate a work though often seen. For some have often visited me, to see my new manner of distilling, which though it was sufficiently demonstrated to the eye, yet they could not imitate it, till with often perusals at length they have found the right path. Others have left it as too hard a work, when it would not presently succeed, which if it hapned to those who had an ocular demonstration, how much more difficult will it be and hard to them who have nothing but what they have heard or read. Wherefore I am certain, that though I should publish every one of my secrets, yet could they not be performed by all men, my coals and materials being left sufficing for my necessity. Wherefore I fear not to publish, the next opportunity offered, divers profitable and excellent secrets, *viz.* in favour of all and every one.

As for that spirit of salt necessary to this work, you may find it in the first part of my Philosophical Furnaces corrected and amended; but the way of separation in the fourth part.

And so I finish this work, being published in

favour of those who by war (though honest men) are reduced to poverty. But what things are deficient in this little tract shall (God willing) be delivered in the next (which shall follow in a short time) largely and clearly without fraud.

FINIS.

THE SECOND PART OF THE Mineral Work.

Of the Birth and Original of Metals and Minerals, viz. *How they are produced by the Starrs, and take to themselves a body out of the Water and Earth, and are found in a sundry shape. Written and brought to light for the sake of the Diligent Searchers of Nature.*

A Preface to the Reader.

Courteous Reader,

Whereas in a former little Book, lately by me published, I mentioned this little Tract of the Generation of Metals, and through want of time, could not hitherto make it publick, although earnestly desired by men of the meanest and highest condition: I have now determined to spare so much time from my other Imployments, as to do this Work for the publick good, no ways doubting, but that (although this my opinion of the Generation of

Metals, doth not agree with all the Philosophers*) yet will it get credit from, and the assent of not a few quick-sighted men.*

That which I here declare, I do not exhibit it with flattering words, or many circumstances, or the testimonies of other Writings, but with a naked and genuin simplicity; for which very cause I would not make this little Tract too prolix, but have unfolded my mind with the most Compendious stile that I could. But let none think that I endeavour to weaken and nullifie the Opinions of other men concerning the Generations of Metals, and obtrude mine in the World, no, not in the least: I leave to every man his free will, and the Liberty of viewing others, who have written Monuments of this thing, and of comparing of them with my writings, that he may evidently perceive which of the two Corresponds most with Nature and Truth: I aim not at any Honour hereby, as if I were wiser than the common sort: Nor do I reap any benefit by making this little Book, but 'tis done only for this end and purpose, That (because I have formerly written of Metalline things, and have also made mention of this little Tract of the Birth and Nativity of them) I may give light unto my Writings, and render them more easie to be understood; for I should most bitterly suffer, if but one only should be lead into errour by my Writings, but I trust that the light is springing up unto many, by the guidance whereof they will more cautiously handle than hitherto they have done. Let the Benign and Merciful God, our Father of all things, of whose Wonders the Heaven and Earth are full, give unto His poor needy Children that which may tend to the Glory of His most holy Name, and to our health.

OF THE Birth and Nativity OF METALS.

There have alwaies been many, and various Opinions concerning the Original of Metals and Minerals, *to wit*, of what matter they are first of all generated in the Bowels of the Earth; and how come to such a fixity, insomuch, that a young Beginner in this hard Science, hath been in suspence; which of them he should assent unto, and by what Phylosophy he should direct his course.

And whereas, throughout the whole Universe in so many Nations, there are so many men, both of high and low degree, as well Learned as unlearned, who busily seek at this day, to get their Felicity from the Metals; and whereas, without the true Knowledge of them, nothing at all of profit can be had (for by what means I pray can any one convert any imperfect Metal into a better, if he be ignorant of what Parts it is composed; into what Parts it is to be resolved before that it can obtain a more Noble Form) and that the Knowledge of their Generation is worthily necessary for their Melioration; we will in a few words clearly evidence, What is to be considered as to their Nativity. Although the whole Company of

Phylosophers do almost unanimously testify, (but yet in succinct, obscure, and ænigmatical Terms) That Metals receive their Generation from above, by the force of the Stars, and are produced in the bowels of the Earth; yet some there are, who contend very ignorantly, and affirm, that Metals have not any seed at all, as other Animal, and Vegetable things have; and that (upon this account they have no propogating faculty, but were produced such in the belly of the Earth, by GOD in the first Creation of things). But this Deceit is too gross, and palpable, and may be met withal most easily, by daily experience, declaring the contrary. For when being found in the Earth, they are by the Miners brought to light, we abundantly, and ocularly perceive, that even now they daily grow, and will not cease from this motion, unless rob'd of their Vegetable Vertue and Life, by external Accidents, which very thing convinceth the Opinion of Errour. Some there are, who teach that God, when he made the World, did instil into the Matrix of the Earth, not the Metals themselves, but their Seed only for its own propagation; which, if so, then long ago, would this Seed have afforded a new harvest of it self (of which, no footsteps are any where extant) by its own absolute Vegetation. Know therefore, that the manner of the Metallick Seed is far different from that of the vegetable and animal Seeds, which are perceptible to the sence of sight and feeling.

For the Metals are not all together created in the beginning of things, but begotten in length of time, out of the bosome of the Elements; and on them, being created by the Omnipotent GOD, is this Command injoyned, and this Power implanted, that they should give growth to all things, by their Vertue and Efficacy; for accomplishing of which thing, the

one cannot in the least want the Company of the other.

For the Stars or Elements of Fire, delivers out the metalline Seed out of its own bowels; which the air carries down into the Water, that it may adapt to it self, a palpable form or body, which the Earth (embraceing it) doth cherish, nourish, and augment from form to form, until it comes to be a perfect Metal, which it (at length) brings forth into the light, as a Mother doth her mature young one; which Conception and Generation of the Metals, taking its Original at the very beginning of the World, will alwaies continue even unto its Dissolution.

For by the efficacy of the Elements, new things are from thence generated, and contrarily, old things are destroyed; which thing is not only done in Metals, but most apparently in Vegetables and Animals: for none can deny, but that various Hearbs, and little Animals are produced upon this Stage, by the alone vertue of the Elements, without planting of the Herbs; and without the Seed of the Animals, which to pursue, I could lay down many Documents, were it needful, but 'tis altogether needless, to say any thing of that, of which none are ignorant. And now, who will not believe, but that the same may be done in Metallicks. God Omnipotent hath implanted in the Starrs, or Element of Fire, the vivifying prolifick and seminal vertue of all things, which power it doth not keep shut up within it self, but sends and lets it down by Divine appointment into the earths center, by mediation of the air and the water; which fiery beams cease not, by reason of their implanted impulse and vertue, to go forward, until they do at last meet with a place, beyond which it is impossible for them to go, nor can they stay there any longer,

but leaping back from the center unto the circumference, are dispersed throughout the whole earth, cherishing and impregnating it: which thing, unless it were done, and those sidereal vertues should remain in the center of the earth, and never flow upwards, nothing at all would grow upon the Earth. But because heat, and whatsoever is of the fire, is endowed with this nature, to go forward as far as it can, and where it can go no farther, 'tis struck back, and leaps from the center to the Superfices; which thing is evident in a burning-glass, whereinto when the Solar beams fall, and cannot penetrate the compact and polisht metal, they are dispersedly forced backwards, and in those fiery beams, whilst (every where) they leap back, do in the porosity of the earth snatch up, as it were, a fat humidity, adheres thereto, and by mutual mixtion are coagulated into a certain palpable Essence, out of which, according to the purity or impurity of the place, a pure, or an impure metal is with length of time produced; because a metal doth not presently become ripe in the same moment of time, but the Seed of the Metal is by little and little nourished and increased in the matrix of the earth, with the heat of the central fire, until it attains its perfection.

Like as in the generation of Vegetables and Animals, it comes in use, whose Seed being received into the suitable matrix, takes encrease from thence by little and little, until (if no obstacles prevent) it obtains a predestinated and appointed form, whence 'tis, that according to the purity of the place the metals are also varied: For it is but one only seed out of which Metals and Minerals do proceed: but the place and other accidents are the cause of their Unlikeness, as we shall prove in the subsequent writing.

But to some men it will seem monstrous, that I say there's a place in the middle of the Earth, the which nothing can pass through or penetrate, but is stopt; that which is heavy remains there, but the more light is carried backwards: which opinion it will be worth while briefly to explain.

In the Creation of the World, the Elements being as yet not separated each from the other, but being a *Chaos*, God instituted their separation, and ordained a place where the more ponderous part of the mass should be separated, (which is the Earth) which thing is even continually done, because every heavy thing or earth knits it self to its assigned point, as a Bee doth to his hive, from whence at length this Globe is made or born, upon which we inhabit: Presently after, that which was next in weight, the water, made its separation from the other Elements, and encompass'd the Superfices of the earth, having the same center with the earth, insomuch that if the earth were not, the water it self would have chiefly or primarily encompassed the stable and founded point of Gravity or the Magnet; but because the earth exceeding the water in ponderosity, doth intercede, it worthily assumes its appointed place, and takes the waters upon its back.

Now, as the other two Elements, the lightest of them, the Fire, God likewise sent to its proper aboad, a place most remotely distant from the inferiour Globe of the heavy Elements; the other light Element, the Air, being the *medium* between the fire and the water, God hath set it between them two, that constantly touching each the other, they might mutually circulate, cherish, and uphold each the other, until being at length dissolved, they are reduced into their own nothing, from whence they

were produced.

For the Fire cannot burn without the Air, nor the Air be conserved without the Water, nor the Water be nourished without the Earth, nor the Earth (being as it were dead) bring anything to light, except the Element of Fire doth first spiritually instill thereinto its own seed, whence it is afterwards made corporeally and sensibility, such as is necessary for all growing things.

And now, lest what I have spoken (*viz.* that the Earth hath its own center unpassable by any thing, whereinto the sidereal rays striking, are contracted into a streight room, and (driven back) from thence are sublimed and distilled throughout the whole Orb, from which all kind of Metals and Minerals (by the help of the Earth and Water corporifying them are produced) may seem a fable.

Know, that this Philosophy is demonstrable by many uncontroulable reasons; which Philosophy I do not my self only embrace, but also many more have done, 'mongst whom the most famous *Sandivow* is not the least, who writ, That in the Earths center is a vacuity, in which nothing can rest, the which thing even the reason or order of Nature seems to evidence, in whose middle point a void place is necessarily requisit, into which all the vertues of the Stars may pour out themselves, may mutually operate upon each other, and excite a marvellous heat, permitting neither delay or quietude for any thing in that place: but from thence, even the unbroken vertues of the Stars are by little and little enforced to go back unto the circumference, where joyning themselves to the most pure earth, they exclude a metallick child; so that you need not wonder, because of that most intense heat that sways

there, when as all the Asterisms, the Sun, the Moon, the other Planets, with Starrs innumerable, do into that place inject their powers with all their might. If you consider but the solar magnitude only, being by Astronomical Calculation 64 times the bigness of the earthly globe (omitting to speak of the other innumerable huge bodies, that jointly cast their influences into the belly of the earth) what an unspeakable furious heat thinkest thou that all these will give, which in the center of the earth muster up their vertues, and make them manifest and efficacious: Consider a little how much one pugil of the Sun-beams can do, being taken in a concave glass, or a metalline ring well polished, or any other instrument, and straightened into the center for a concave-glass rightly made, having but the Diameter of a span, doth easily burn wood, or any combustible body; but if the Diameter be two spans, it melts with the Sun, Lead, Tin, Bismuthum, and other metals easily fluxible; if 4 or 5 spans, then it melteth Copper and Silver, and so mollifies Iron, that it may be wrought upon the Anvil. If now experience evinceth this thing, that a little handful of the beams collected and strengthened into a point, be of so great force as to melt even metals, and to fume away ☿, ♁, and Arsnick, Auripigment, Koboltum, and other volatile and immature metals of like kind; what thinkest thou would be, if the beams were congregated the compass of 10 or 20 fathoms, doubtless they would burn up all other metals, except Gold, like a flame, and elevate them into fume? And what are 10 or 20 fathoms, if compared to so many thousands of thousands which are attributed to the Sun, whose heat (passing by to speak of the other great Starrs) if it were congregated into one place, (which is so done in the earths center) what an incomprehensible

burning heat, thinkst thou, would be there? verily nothing would be fixt enough to resist the burning; and indeed there is nothing in reality that doth resist it, whence necessarily that point is vacuous wherein nought can rest or remain.

Thou wilt object, that I speak of many things, but prove a very few; for who was ever there, and beheld such a Cavity? I Answer thus, that albeit, there be no ocular Testimony of this thing, yet naturally Phylosophy affords Testimony sufficient, whereby 'tis in very deed demonstrated, that such a place there is: now none denies, that the Sun and Stars by their motion do inviron the terrestrial Globe, and imprint their beams thereon, which being granted (for no sober man will contradict this) it also follows, that those hot and invisible beams do by an innate force and vigor go forwards, until they are somewhere stop'd, and a further progress prohibited them; which thing is done in the middle most point of the Earth, or all the Phylosophers are altogether Lyers, who unanimously believe, that the heat is carryed directly forwards, and not backwards: but behold an apparent Example of this thing: Put a Coal upon some thick brass, or iron plate, and thou shalt see that the side under the Coal will first wax hot by the penetrating heat; take off the Coal and try with thy hand, and thou shalt find it hurtful by the overmuch heat; try also the under side of the Plate, and thou shalt find it to be but gentle warm, and after a little delay, try yet once again, and thou shalt find that the heat is gone directly forward, and that the underside of the Plate is hotter than the upper part, whereupon the Coal lay.

Hence thou maist clearly perceive, that the heat never goes backwards, but is carried directly

forwards; which being so, thou shalt be enforced to confess *nolens volens*, that in like manner the Astral heat sticks not in the Superfices of the earth, but pierceth even to the very bottom center.

Well, but thou wilt again object, If the Sunbeams descends through the earths thickness, even to the very center, Whence is it, that the whole earth grows not hot thereby, or at least so warm as it is on the surface? for 'tis found by experience, that the digg'd-up earth is not warm, but cold, and no heating beams are therein perceptible. Take this for an answer, That the dispersed beams of the Sun do not display their efficacy, but only in those places where they are collected and become sensible; a hint of which you may observe in the earths surface it self; where a speedier passage being not permitted, but through the hardness of the stones, and its own density, there being a stop and obstruction, the heat becomes duplicated, and manifestly augmented, insomuch, that in all very hard rocks and clifts there is sometimes created so great a heat by the continual Conflux and Condensation of the Sunbeams, that if accidentally, wood or fuel be laid thereto, it burns and flames up, which never happens in a thin and porous Aire (how near soever to the Sun) it being uncapable of stoping those beams; for by how much the higher you ascend into the Aire, by so much the more intense shall you find the Cold to be; insomuch that the most Touring Mountains, altho' posited in warm Countries, are alwaies covered with Frost, Ice, and Snow, when as in the bottom of those Hills, the Ground is very warm, and brings forth varieties of Fruit, although it be more remote from the Sun: The cause of which Cold in the Tops, and of Heat in the Bottom, only consists in the reflection of the solar Beams, which are stayed and multiplied below;

which thing cannot at any rate be done in the Fire that is above.

These beams having first passed the superfices of the Earth, where they were a while joined and multiplyed, are by little and little debilitated, and return to their simplicity; whence it comes to pass, that that part of the Terrene Globe, which is furthest distant from the Centre, hath as little heat, as the Aire on high: but if it were possible to ascend higher, and nearer to the Sun, the heat would by little and little be encreased, and be found greatest at the Sun it self: In like manner may a Comparison be made about the Earths heat, which near the Surface is very faint, but nearer the Centre, more and more encreasing; (there being its Seat and Collection) so that the middle Earth, between the Sun (from whom the heat flow) and the Centre, where the whole being gathered together, is repercussed, may deservedly be esteemed the coldest part; of which truth, a certain demonstration is readily produceable.

For when in the hottest day of Summer, watry Clouds are elevated by the Winds, higher than ordinary, they are made pure Ice by the force of a most intense Cold, which fall down in little bits of that form or shape, which they were imprinted with by the Aire, to the great detriment of Vegetables; and is by us call'd Hail, and so cold, that we are not able long to hold it in our hands, and usually lies some daies in the Suns heat ere it melts by the warm Aire, and returns into Water.

Now then if there were not a great Cold in the middle Region of the aire; whence is it, that those Clouds are so frozen; and who knows how great the Cold is, where the Aire, in its own middle point, is most of all cold; doubtless it is so great, that no

living thing is able to live therein the twinkling of an eye, but would incontinently be transmuted into a stone, even as we have frequently perceived the earthy Exhalations born up on high into the middle Region of the Aire, to have been there coagulated, and compacted into the most hard stones, and so to have fallen down; and not only stones weighing some pounds, but also metals too, and chiefly iron of a great weight, representing the shape of many conglomerated drops, have been in that part of the Aire condensed out of dry Exhalations, and thrown down thus concreted; the which thing others have handled more at large; whence 'tis sufficiently evident, that the Sun-beams, in such places as they can freely pass through, without any impediment, give not any heat from themselves: but only where they are detained and fixt, and by how much harder the detaining matter is, by so much it causeth a better heat. Thou also seest that Wood, or any porous Body never contracts from the Sun, so great a heat, as a stone doth; nor doth a stone, so much as a metal, although all placed the one by the other, to the Suns heat; the cause of which diversity, doth alone consist in the pores, of which some bodies have more, some less; thereby granting a more speedy passage to the heat; for 'tis (as I have often said) the property of the heat, to hasten directly forwards, as long as 'tis not impeaded, and extreamly unwilling to go back. A Testimony whereof, as well the Kitchen Fire, as the Solar, or Fulminous Fire affords unto us; for if any body sitting near the Fire, hath casually in his pocket, any metal, be it a key, knife or money, the heat (easily penetrates the thin Garments) lights upon the metal, whereto it adheres and augments; and gets so much heat, that sometimes it cannot be held in the hand; but the

cloathing, although nigher the Fire, is scarce gently warm; the same thing usually falls out in Thunder, whose Fire, because it flyes very furiously, if it hath not room to pass the pores of solid withstanding bodies, it dissipates and dissolves them in a moment, and leaves porous bodies whole, which Lightning, often melts the sword in the scabbard, or money in the purse, the Receptacle of them being whole: It also breaks the hollow and marrowy bones of Animals, the flesh remaining whole and sound; the Cause thus, for that this fulminous heat most swiftly penetrating, is deprived of time to penetrate, and warm a metal by degrees, and will not return backwards, contrary to its own nature, and therefore subdues and conquers the weaker Element by force and power; for Fire only is the most potent of the Elements, and knows not how to yield to the other three, but they are compelled to stoop to it, with which priviledge the said Fire is from God endued, even from its very infancy.

In the same and like manner is it with the Sun's, Moon's, and other Stars heat, and occult Vertues, which by their efficacy, hasten on forwards so long, until they meet with that which they cannot penetrate, where making a stand, and heated as it were together, are compelled to go back, searching after a place to rest, and become corporeal; for the chiefest heat being in the Earths Centre, gives not any delay to any thing, but continually drives back, what flows thither, into the porous and moist Earth, where the Beams being sublimed and hidden, may cloath themselves with a sensible Corporeity, and proceed from one degree to another, until they are well concocted into perfect Metals, no impediment intervening.

But let me not be mistaken by any one, as if it 'twere my Opinion, that in the Centre of the Earth, the fiery place is constitute, of which the Scriptures make mention; for I have nothing to say as to that place; nor desire to know ought concerning it. This place which I describe, is discovered to us by natural Phylosophy, but that place the Scripture makes mention of, I leave to Theologists, by which they may terrify the wicked Multitude, that they precipitate not themselves rashly, and by Troops thereinto.

And now because the Hellish fire is here mentioned, I cannot omit to blast the most unsound Opinions of some putatitious Doctrines thereabouts: There are in many places found Mountains, belching forth, with huge force, flames, fumes, ashes, and stones: In *Europe*, is the Hill *Ætna* of *Scicilia*; in Island, is *Hoctu*, behind Norway; there's also *Vesuvius*, adjoining to Naples, and many more other places in other Parts of the Earth; some part of which continually burn and fume; others at certain times and intervals; which places, many account for the fumings of Hell.

But verily this cannot be rational, because those burning Mountains have a natural Original, and Cause of Fireing, known but to very few; for in some places are found Mountains wholly Sulphure which being kindled, either by the Central or Elemental fire of Thunder, or any other accident cannot but burn, and when such a Mountain hath but once taken Fire, and begins to burn, who can restrain the burning; no body, because of the greatness of the Fire, and danger of what may happen, being therefore left to it self, it feeds downwards, being never destitute of matter fit for the fire.

And now if any one understanding by the Monuments of the Antients, that these Mountains have burned for some Ages, yea, and for Thousands of Years, should wonder, whence Fuel sufficient for that Fire should be had, let him know, that this may easily be done; that a Mountain should burn without intermission, not only for the magnitude of the Terrene Globe, in which a mountainous Wax, or Bitumen, Brimstone, and such like Combustible Things abound: But also, because of the never-interrupted Motion of the Stars, whereby they never cease replenishing the Earth with their out-flowings, and generating (besides Minerals) such Combustible matters as these, augmenting and cherishing the Fire.

But they endeavour to confirm their Opinion by the lamentable Howlings, which at some times are heard nigh those Mountains; which Cryes, the credulous Vulgar People report to be of the Souls, which are lost: But these are but Trifles; for those Out-cryes are then only uttered, when the Mountains endeavour to throw out much fire, otherwise they burn and fume very gently, which as soon as the Adjacent Inhabitants perceive, they well know, that they shall shortly have an Harvest of ashes, fire, & stones, out of the Mountains: and that they may avoid the hazard and danger threatned by the Fire, they carefully keep far enough off. And for the most part, a great Quantity of the Sulphure is prepared in the neighbouring parts, whereby the needy get their food, by digging it up, purging it from its Impurities, and preparing it for humane uses; but as to the Cryes, it seems to be nothing else in my opinion, but only the fire breaking forceable through the streight Channels, the hard Stones and Caverns, and produceing thereby a dreadful sound, which they commonly call Ejulation, or Howling. They also add,

that about those fiery Mountains, Ghosts, Visions, and Spirits usually appear visibly. This also is true, and Grounded upon Nature, but yet thou canst not prove that they are Devils and infernal Spirits; there being even otherwhere seen, and found diverse Spirits in the Bowels of the Earth, being Monsters not unwonted, or strange to such as dig, or are Miners, by which they are frequently injured; yea, and sometimes destroyed, lamed or infected; sometimes these spirits are hurtless and idle spectators, or playing with the workmens implements; or even labour themselves not in the least filling their Pockets, how strongly soever they shew themselves bent upon their work. But such spirits appear in various forms, oftentimes resembling an Horse, a Dog, or other Beast, sometimes a Dwarf-like crooked man; frequently they appear cloathed with an ashy Cowle of a *Monk*; they usually are Testimonies of great Felicity and rich Mines; sometimes they do great mischief, by choaking the Miners with a wicked habit, or throwing them headlong into the Pits, by reason of whose malice many of the rich Mines are unavoidable left undigged, they boldly defending their hidden Treasures.

Let these things concerning the spirits, about the burning Mountains, or those remaining in the profundity of the Earth, and appearing in the several shapes, be spoken by way of Parenthesis. And now I return to the thing in hand, and will demonstrate, that there is nothing of Community betwixt these burning Mountains and the central or infernal fire, but that these blow out a thick and material fire; which I thus prove.

First of all, These Mountains do at sometimes cease to burn, breathing out smoak only between whiles

more copiously: sometimes they dye and expire through want of fuel to supply them.

But the central fire can never be either diminished or vanish as long as the sun shines and starrs glister, and send down their vertues into the earths centre. Even as the infernal fire shall never expire, the Scripture thus testifying, wherefore that fire, though a most furious Mountainous fire, cannot be either of these two, but is meerly material, subject to encrease and decrease, and its food desisting, plainly extinguisheth: Besides, the fire of those Mountains heats not fervently, but for the greatest part smoke obscurely; but the adjoyning Earth is very hot, for the space of some miles, so that you cannot long stand there without injuring your feet. The Waters also which slow down from them, are boyling hot, and manifestly smell of sulphur a good Portion whereof they have within themselves.

Besides these flaming and smoaking Mountains, there are sometimes found other Denns or Caverns, breathing forth neither Flame nor Fume, and yet a great heat, which is another kind of fire, which is largely treated of in the Chronicles of Metals, where amongst other things, this is also added; That on a time a Wind gaping, arose in a certain Mountain, and sent forth a huge heat, and in the night only was some splendor perceptible, ascending towards Heaven, and sometimes a breathing heat was only observed.

On this a curious *Monk* was in himself perswaded to let down into the cranny, a pot, bound on an Iron Chain, with intent to draw up some molten Gold, which he believed to be thereunder, which when it came to touch the fire, it presently melted and fell down, the which in like sort burnt away like Chaff,

with a good part of the Chain also, and was ejected and thrown up again in the form of a fume, with a great noise and crack, but the Monk hardly scap'd with his life, the gold being left behind in the Hell; but thou maist readily divine what sort of fire this was, which reduced the Pot and Chain into fume in the twinkling of an eye, that it was not a material fire, because void of smoak, but the astral fire.

It is well known to the Miners, that the central and gehennal fire doth oftentimes ascend the high parts of the Mountains, and warm them, and there cherish and maturate the metals: which Caverns, when in their searching for Metals, they come nigh unto, they feel too much heat, that they are even against their wills compelled to desist. But this heat, although indeed in the action of the growing, Minerals doth usually excite and make great enough; yet for the greatest part it derives its Original from the central fire, and this central from the Starrs. But after what manner and reason the starrs beget the central fire, and this generates the Minerals and Metals, I will demonstrate to the unknowing as briefly as I can.

Thus therefore stands the case: We read in *Moses*, in the first of *Genesis*, that God, when he made the World out of the confused *Chaos*, did give the Elements their original first, and assigned to Earth its proper place, and injoyned on earth its Office to be done; but by what means they are preserved by the interceding perpetual Circulation, natural Philosophy doth demonstrate. It will not therefore be to our purpose to treat prolixly of them, but only of the rise and nativity of metals, will I compendiously speak as far as I know of them, *viz.* in what manner the metallick kind draws its original from them, together with its encrease and augmentation, and how having

arrived to the top of their perfection, they come to their end.

I have a little before demonstrated, that the superiour element of fire, as the Sun, Moon, and the other Starrs, send down their invisible vertues and fiery beams into the earths center, where they are congregated, and cause huge heat, and being not permitted there to rest, leap back again, and are scattered throughout the universal Globe, and impregnate it with various and wonderful Crescentials, which are called Minerals by the Philosophers, cherishing and perfecting them in various forms. The reason and manner of which thing I will here in a few words unfold.

Every spiritual thing, come it from whatsoever body it will, is invisible and impalpable, nor can any thing be made of it alone, but it's forced to remain a spirit, until it meets with a subject whereto it may adhere, be united, and by the benefit thereof be turned into a Corporeal Nature, and pure, answerable to the purity of the subject and spirit, the spirit is in the room of seed; but the subject answers to the earth or matrix in which the spirit is concocted, into a sensible body suitable to its own nature. But 'tis to be known, that the manner of Metallick conception and generation, is far different from that of the Vegetable and Animals: For in most Vegetables that have arrived to their perfection, nature works out a seed for a farther propagation and encrease, being the most excellent part of the herb, which at the Springs Entrance being committed to convenient earth, produceth a new plant in all points like unto the former, from whence it sprang, by which doing new seeds of the same plant, are always conserved. Although indeed some plants are

not propagated by the seed, but by the root. Yet they are very few, and in such, the root it self serves instead of seed. And that in some places Plants grow out of the earth, without the assistance of either seed or root, its done by the help of the Elements, in whom the same force of impregnating the void earth and production of Plants, is at this Instant, as was at first, when they generated and brought them forth in the beginning of the World. In like manner is there a twofold production of Animals, the one done by a proper sperm, by which they are propagated, the other is a production of some little Animals, upon the world's stage, even without Sperm, by putrefaction only, and the mutual action and passion of the Elements.

These two waies have footing also in Minerals, the one is the Universal impregnation made by the Starrs in the beginning of the world, the other is Daily. And even as the first generation of Vegetables and Animals is to be accounted far more excellent than that which is accidental and quotidian, so is it with Minerals likewise. As some Vegetables arrive to their perfection, and perish sooner than other some, so do metals and minerals also; and by how much the sooner and quicker growth they have, by so much the sooner do they perish; and so on the contrary. And as a rational and movable Animal is a thousand times in his nobility and fixity beyond a Vegetable, so also doth a Mineral, by reason of his fixity, far transcend any Animal; which wants an immortal soul.

Now when the Vegetables, Animals and Minerals, fatally terminating their period, are corrupted, and return into a nothing, each Element takes to it self what is its own. The Starrs, the Spirit, the Earth,

keeps the body which it formerly gave, and the Principles of the thing do each return unto their Fountains from whence they at first did flow.

And in this manner is there perpetual Death and Regeneration of things, by the testimony of Experience.

There are many ways by which Metals are brought to light, *viz.* by huge Fires: if by Accident and Carelesness of Shepherds, a Wood catcheth fire, the Earth by reason of the intollerable heat Gapes, and the molten Metal flows forth and is detected: sometimes also vehement Earthquakes discover them.

Besides, the Veins of Metals are found out when deep Wells and Pits are digged, or by the Plowing in the Fields, they are sometimes dig'd up, and their Veins discovered: strong Rivers washing away the Earth and Sand, do sometimes open their Veins; the Fruits of which being found in the Banks, give cause of searching after them.

They are also discovered by means of an Animal, even an Horse, by pawing with his foot, beating away the Earth uncovers the Vein, which happen'd at *Goslaria* in *Ramelsbug*; even Hogs searching after Acorns, have diged up Mine-pits; or a pure Metal lifts up it self into the Aire in the likeness of a Reed, by which means the exceeding rich Mines of Silver at *Kuttenberg* in *Bohemia*, was by a Monk manifested to the World, who walking in the Wood gathered a Silver Reed growing out of the Earth, and put it in his Cowle, and declared the thing in the Convent.

Sometimes also most vehement storms pulling up very great Trees by the roots do open veins. Most frequently a Corruscation gives undoubted testimony

of Veins, which being enkindled by the warm air, runs a long some space, in the likeness of a blew flame; nor is the finding out of the process of Veins (not lying over-deep buried) very difficult if you rightly consider, for they continually breath forth a warm Sulphureous vapour, upon which, not only the Grass growing is thiner than is elswhere wont to be, but even the Trees that grow upon them are dwarf-like, have paler and thiner Leaves than other Trees elsewhere planted have.

Likewise where the Dew, Hoar-Frost, sooner melts and vanisheth, 'tis a testimony that a Metal is thereunder; the cause of which melting, is the warm vapours attending from the Veins.

But that testimony which the most imploy themselves in, in seeking by an Hazel rod (which my self have many times experienced) is fallacious and uncertain.

This is the Work of the Art, if any one conjoyning Metals in the Fire under a certain constellation, melt them into an electrum and make of them a little Ball, perfortated in the middle, wherein a wand of hazel of one years growth wanting little boughs, is to be implanted, which carry streight out before thee where thou conjecturest Metals to be, when the little Ball, bows the Rod & bends towards the ground it is without doubt that thereunder are metals, & that the labour undertaken about them will not be in vain.

This testimony proceeding from the Natural and infallible foundation of Philosophie, is deservedly to be preferred before all other Arts concerning the finding out of Metals.

Nor mayest thou wonder thereat, for we are unacquainted with most things; who is it that can

certainly unfold why the Magnet atracts Iron, and heated Amber attracts Straw, Grass, Thread and other Vegetables? the whole Earth is full of unsearchable Wonders and Secrets of GOD which are to be diligently observed by us.

Now as to the causes, why so many kinds of Metals are generated so unlike amongst themselves; some think one thing, and some another; many will that the Seven Metals onely have their product from the Seven Planets, *viz.* Lead from *Saturn*, Tin from *Jupitur*, Iron from ♂. Gold from the *Sun*, Copper from ♀. Quick-silver from ☿. and Silver from the *Moon*; but I am not of that Opinion; for how can the Sun, ☽, or any other Planet seek out to it self in the profundity of the Earth, a peculiar place where to sow its Seed, and procreate a Metal conformable to it self; whereas we see that no Metal is digg'd out of the earth, alone, but alwayes mixt with others; for thou shalt never find Lead but there is silver in it, more or less; no Tin is dig'd or washed out but it hath Gold and Silver; all Copper and ♂ contains Silver, and sometimes much ☉ which is neither conceived of, or believed by the Metallurgists, nor is ever Gold found without Silver or Copper, and ☽ is very seldom void of ☉ or other Metals; but if each Planet should generate its own Metal, how comes it that another is adjoyned to it? I speak of those Metals only, which are either solely contained in their own Veins, or else are found and washt out in grains in the Earth or Sand, either pure or mixt with stones.

I exclude those which are (two or three mixt with each other) each in his own proper Vein, and are a burden or impediment, to one another, as Metallists speak, and are often carried along a great while

together, and not seldome do come together making one Vein, and are by and by separated and dispersed into various little Veins; and now, if each Planet should create his own proper Metals verily he would also chuse his own place, and would not suffer another to possess his proper nest, and disturb his operation.

But let us allow to each his proper Metal, and then what Starr should we assigne to Bismuth Cobolt, ♁ and Zink for their Generator, they being undeservedly excluded from the Metalline Company, wherewith they are nearer affined then ☿, being fusible with other Metals, and brought to use by the Artificers hand, which with ☿ Cannot be done; indeed some are to be found alone, in Veins, as Lead and Silver, but ☉ being any where found and cleansed from every Mineral, and washed out of the Sand, yet never wants Silver and Copper; Tin and iron are also gotten out of the Sand, and Earth in small pieces, never simple, but mixt with stone; these grains or pieces yield the most Excellent Tin, (Called by the *Germans* Seiffenzin) and for the most part contains more Gold than that which is digged out of the pit, Because while those litle granulated stones are washed out (Switter or Sintranpen) many granulated ones containing much Gold, commix themselves therewith, and are excocted and melted together with the Tin; in like manner the little grains of Iron yield the most Excellent Iron. The Miners find ☿ either runing or inclosed in a Red stone but to be excocted and vivified by Art; sometimes also Copper is found in very little stones (Recauplein) like the Angulated Piris Stones; otherwise all Metals grow in their own Mines or Veins of the Mountains, out from whence being gotten with greatest labour and cost, together with hazzard of life, are purged from the

Mine, by beating, washing, and melting; but how each are to be known, exploded, digged, beaten, washed, melted, and separated from heterogeneous things, is copiously demonstrated by the most Famous and Antient Metallists, *George Agricola* and *Lazarus Erker*.

I do therefore conclude that Metals, and Semimetals or Minerals, have their birth from one common Seed, but are by accident severed into various forms and shapes.

For the Vertues of the Stars being jointly carried into the Centre of the Earth, do not remain alone, but being mixt each with the other, goe back into the Caverns of the Mountains, seeking a place of Rest, where they may make themselves a Body; which if it be pure, makes also a pure Metal, if impure, an unpure Metal; and such place is most like unto a Matrix, conceiving Seed from the Male, which if it forms into a body, cherisheth, and being excocted to maturity, perfects it. Now the Astral Spirits supply the room of man-like sperm, which being received into the moist Earth, in Caverns, as in a Matrix, is nourished, and fashioned into diverse metallick Forms, and palpable Bodies, according to the purity of the place.

Hence also ’tis evident, That various kinds of Metals are generated out of one Seed accidentally, because the Metals, whilst in being, do grow riper by little and little, and are more and more meliorated, and daily experience doth demonstrate, that they are nobilitated, not only under the Earth, but even above it. Hence ’tis, that the Miners diging out an immature Mineral, as *Bismuth*, *Cobaltum*, or *Zinck* examining it, as they do silver, and finding nothing, say, that they came sooner there than they ought, which Minerals

being exposed to the Aire, and then exploded, and tryed after some years, are found to contain much silver.

On this account I affirm, That if the common Seed of Metals, had alwaies a clean, and fitting Matrix, and no accidental impediments intervened, nothing else but Gold (the highest perfection of metals) would be generated; and that this is Natures intention, alwaies to bring to perfection, what she hath begun: but Gold only attains this state, all the rest remaining imperfect; but it shall be clearly demonstrated in the Third Part ensuing, that by genuine Alchymy, even they may be advanced to the same degree, which if it could not be demonstrated, that imperfect Metals might by Art, be brought unto perfection, and by Industry, and the Fire; it might be very probable and credible, that each Metal had his own appropriated Seed and Planet.

But now, if common lead possessing but little silver, by the usual trying of the Cupel, may, by the benefit of maturating Salts, be so far perfected by a short digestion, as to yield much silver; and by a longer digestion or fixation, to yield, even Gold it self, which it had not in it before [*Cons. Part 3d.*] 'tis evidently perceptible, that 'twas not Nature's intent, that Saturn should so remain in his Saturnine Estate, but that he should be made Silver and Gold.

The other imperfect bodies may also be maturated by digestion, that they shall yield forth fixt Gold and Silver.

In like manner the spurious Metals or Minerals, as ♁ *Cobolt*, *Zinck*, *Bismuth*, and others of that kind may be so fixed, as to be behind them, in the Cupel, good Gold and Silver, which is most plainly done in the Third Part.

Thus thou seest, That ’tis not Natures Fault, that there is so many imperfect Metals; but ’tis to be imputed to external Impediments; for if that Gold lay not hid in the Potentia in the imperfect Metals, by what Art could it be reduced into action?

Art cannot create either Gold or Silver, but Nature can, and yet doth not alwaies accomplish it upon the Earth without the industry of Art: When a Gardner suffers the seed and root of the Plant to wither, nor commits it to the Earth, that it might be perfected; ’tis not the fault of the seed, but the Gardner, who suffers it, that it comes thus to perish. Nature doth very often want help, as appears in the fruits of Animals, and Vegetables; and why may not help be necessary and profitable in metalline products, where, by the Artificers ingenuity, they may be holpen. ’Tis evident then, that Nature aims, as well to make Gold out of Minerals, and baser Metals, as to make a Man of an Infant; or a Tree of a Nut: and if it be otherwise, it is not to be imputed unto her, but to external Accidents.

Now I suppose that I have sufficiently proved by these things, that all Metals proceed out of one seed and root; and may be reduced thereinto, and also, that Minerals may be compared unto the first buding of Vegetables, imperfect Metals to Semi-adult, or half ripe Plants; but Gold to perfect seed or fruit, brought by Nature unto its end or bound.

But this is to be understood of the Universal Birth, and Generation of Metals; which for the greater part, drawing their Original in the profundity of the Earth out of the Central seed, do grow in Caverns and Veins, and increase together into various forms, and are from these digged out with great costs, hazards, and labour.

Now there's another Generation actuated in a plainly-diverse manner, without the Central common, and propagated seed, done upon the Earths superficies, by the Operation of the Stars above; yet 'tis the least part of Metals, that are thus generated. It hath been said, that there is a twofold manner of Generation, nature makes use of in Animals and Vegetables, and so its in Metals.

The First is most frequent and notable, the other is rare and insensible: The one is done in Plants, by the preparation of the seed or root; the other strongly perfected by the influence of the Stars, and the Elements efficacy and power: for Example, If Rain-water, being received into some Vessel, exhales in the heat of the Sun, or of the Aire, an Earth remains, which by an innate power, produceth various little Plants, little Animals, small Worms and Flies, without the access of seed.

The same happens in Metals, when the Sun, or any other Star operates upon the moist Earth; the astral Vertues are congregated, and being made corporeal, do exhibit diverse Minerals and Metals, according to the purity of the Matrix, or moist Earth; where the Water is instead of the Matrix, and the Stars instead of the Father, or Seed: likewise, it is not possible for Metals to be generated in the Centre, where all things are dry, but far off from that place, where the Waters moisten the Earth, and with which the Central Spirits can join themselves, and pass into Bodies and Metals.

For a dry spirit cannot coagulate himself into a body, by reason of his dryness, but wants a fit subject, from whence to take its body, which is Water: as soon as ever the sulphureous spirit is mixt with the water, it is no more common water, but the

rudiment and beginning of a metallick generation called ☿ by the Philosophers, not the vulgar being already made metalline, but a viscous water, which the metallurgists call Gur or a fermenting spume, which if contained in a convenient place, and Cherished with the due Central heat, and an humidity, is in length of time maturated into a metal.

The Conception therefore, and generation of metals is not only in the profundity of the earth by the mediation of the central spirits carryed upwards, but also in the superfices by the stars casting their invisible beams into a subtle, and fat earth where they are held, and become Corporeal.

For the sidereal fire never ceaseth to infuse its virtues into the earth, and to Impregnate it with various products of vegetables, animals, and minerals, according as it meets with a matrix, nor is this done only in the earth as being most fit for metallick generation, but even in the air in thick Clouds, do they act the same thing.

Truly we frequently see that not only little Animals, as Palmer-worms, Caterpillars, Frogs & other insects are there conceived and thence excluded, and descend mixt with the rain, but tis also evident by Credible Testimonys, that stones of an hundred weight, also Masses of Iron in the form of small Conglomerated drops, exceedingly malleable have fallen down from the air, and also various Comets and other Igneous substances being gathered together in the air: are kindled; their matter being taken away they dy, and falling down upon the earth like a fume of Arsnick they infect it with their brats, whence an harvest of many deadly diseases doth most plentifully bud forth. Nay even thunder and lightning it self is nothing else, but a subtle nitre

enkindled, and with the Crack falling stones are procreated in the air; thence it appears, that not only the central fire doth ingravidate the Intrals of the earth: but also the Astral fire seeks a place of creating metals in the superficies or in the air it self, but no where more apt then in the veins and dens of the earth.

I well know, that there are many Opinions of those metals, which are not in the bowels of the earth; but are found above either in the earth, or sand in little grains, but they are for the most part Erroneous. Most men do think that gold which is found on the banks of Rivers and there washed out, was not generated in that place, but were broken off from some veins of gold by the strength of waters, falls, or floods, and brought thither out of the mountains, which indeed may be true, for somtimes torrents do hurry alongst them little shining golden grains which are afterwards taken up on the hairy backs of the beasts, but that all gold found in Rivers, and streams, is by the help of currents washt out of the mountains, seems unlikely, but was rather generated there; for sometimes gold is gathered by a river from whence the fountains are exceedingly remote and distant, which should bring it thither.

Likewise in open Mountains, never seen by any fountains, is gold gathered out of the earth or sand, of which kind is almost all the gold, which the Hollanders buy of the Indians of the value of an hundred or thousand markes, which is not gotten out of the fountains or rivers, but for the greatest part out of the sand in open places, Elevated from the waters.

Such sublime and dry places have been in Germany, also where the auriferous earth was

carryed down to the rivers, and separated from the gold, and even to this day where little grains of Zwitter or Tin are washed out, are grains of gold also found, not in low deep places, but scattered about the mountains and are usually melted with the Tin, whence tis that such Tin is generally wont to abound with gold, which thing I have frequently found experimentally.

The cause why gold is oftner found near rivers and streams is this, because that being carryed on with force they wash away the sand, being lighter and leave behind them, the more heavy grains of gold, from which the remaining sand is washed away with less ado; but now the Rhenish gold, such as here is in Germany, and the like, is not pure, but mingled with silver and copper; nor is it always alone, or fine, like a metal, but in the form of an heavy and sulphureous powder, whose combustible sulphur being burnt and removed by fusion, it acquires a golden colour tenderness, ductibility and purity.

But that which is brought from India, is, as to appearance gold, and is some greater, some smaller graines, and not as that with us is, yet not fine, but some is found better than other some.

I sometime saw a dutch Merchant having a lump of this kind of gold well nigh fine or of Twenty four Carracts weighing some Lotons, but generally they are of the bigness of a midling sand. But that which is washt out in Hungaria, and Transilvania is esteemed the finest of all, which I have found equivalent to duckets.

Now I suppose that I have sufficiently demonstrated, that all gold is not generated by the central fire in the belly of the earth, but also in the superfices thereof, by the vertue of the superiour

stars, and not only gold, but other, metals and minerals, especially ♂ and ♀ are in like manner generated, and ♂ most frequently, which is plentifully found every where in round or angulated little stones, for the most part of a golden Nature, and though commonly neglected yet deserve well to be observed.

Such also are those flints which are within of a reddish colour conteining a golden iron, for there is a great familiarity and friendship between ♂ and ☉, where under lys hid, a great secret and in the third part shall be explained more at large.

Now for a further conviction of such as are incredulous, the metals are generated upwards or here above in a moist earth without the central seed, this example is conducible in marshy parts, and places that are always moist, the Superiour Stars have a fit Subject to generate Metals in, witness Holland, where they yearly dig a peculiar turf or earth, which they burn instead of wood, which contains, besides sulphur, Arsnick, ♂ and ♀ yet, all, is not thus, but only that which is dig'd out of the most deep places, and is called bactert, the rest called been seldom contains any thing other thing than, sulphur & a little Arsnick, whereas the other hath very much, sulphur and Arsnick being an unwholesome fire to such as are not there unto accustomed, which although it be in depth Twenty Thirty or Forty feet, yet do they scarce extract or dig out five or six, or at the utmost ten foot, because in some depth it wants sulphur altogether, and is unfit for the fire.

Now then such as try for bituminous Turf, or such as search for the depth of a Marsh, or seek after a sandy bottom, drawing forth the earth with long

borryers or Caugers, do find that by how much the deeper they go, so much the less, sulphur they find, and at the bottom none at all.

Whence tis evident that sulphur Arsnick, or that Mineral that lys hid in the earth received his Original from above, and not from beneath. But the most Metals are produced in the earths bowels, and the fewest nigh the Circumference, whose seed is found more powerful in the deep, than in the Circumference; for the sidereal virtues do constantly hasten to the centre, and not finding further passage fight together, and strive each against the other, and cause a huge heat, by the repercussion whereof the whole globe grows warm, and is gravidated with all kinds of Minerals.

Thus then are all Minerals, and Metals procreated, as well in the deep as in the Circumference, out of a most subtle Astral seed, with a sutable moisture wherein it frameth a body to it self, nor let any wonder that Metals are generated of an insensible, and most subtle warm vapour, if joyned with humidity, they fall not down from heaven as a stone from an house, but descend spiritual, and getting a fitting place in the earth do (by the waters mediation) put on a body, and get their weightiness from the earth, even as the seeds of vegetables and Animals, which (as is most evident) give only the form, increase and life, but supplys not the place of the body it self.

But most false is the foundation of such as imagine, that Metals have there Original from common running, ☿ and burning sulphur (each being a semi-mettal) tis indeed certain that metals are born of ☿ & sulphur but not the common, but such aforementioned, *viz.* Astral, a sulphureous warm,

dry, and spiritual soul, and terrestrial viscous water, from whose mutual conjunction (as of Male and Female Seed) all Metals are born.

That Erroneous Opinion hath been the cause of many labours on, ☿ and they are not a few, who have wasted all they had by this, their philosophy. And how many have attempted to fix common, ☿ either with or without Gold or Silver, and do at this day attempt the like, with hopes of turning it into Gold or Silver, but all in vain, my self have to my loss tryed it, and how far I have come, the third part shall declare.

In like sort as great a number have attempted to extract runing, ☿ out of Metals, intending to fix it (as the first of Metals) into Gold or Silver, but all in vain, for as the beginning was foolish, so the end terminates in loss; and such have chiefly with much trouble sought after the ☿ of ♄ or Antimony being perhaps seduced by the sayings of the Philosophers, who affirm that ♄ the father of all Metals reduced into ☿ may be easily Changed into Gold, but this is not that running ☿ but a viscous water, that may be handled like the first being of Metals, according as the Artificer willeth, and may be changed into any form. I cannot tell what madness possesseth men that aim to reduce ♄ or ♁ into running ☿ in hopes of a more easy fixing it, whereas neither of both ever was running ☿ and in my opinion will never be, but grant it may be made ☿ to what will it be more profitable then ♄ it self, it being hereby made more volatile, and not more fixt, but say they ☿ is a purer substance then ♄ and will therefore the more freely be amalgamated and fixed with the Sun and ☽ no, by no means. Well! I will grant that ☿ may be made of ♄ or ♁ which yet I can hardly believe, what will it profit

thee? Nothing at all; but now I readily believe, and have experienced that ♄ and ♁ being after a Philosophical manner reduced into ☿ that is, into a viscous water, is most easily joyned with the ☉ and ☽ and is to be fixed even without them, but twas never seen that, the putatitious ☿ of ♄ did ever accomplish any praise worthy thing in the Meliorations of Metals. I grant that running ☿ may easily be made out of any Metal by the addition of vulgar ☿ and I have tryed it, but what profit comes therefrom; enquire of those that have to their loss practised thereabouts.

If running ☿ were the principle of metals, some smal portion thereof would verily be found in all mines of metals, or in most of them, but because it is not there found it necessarily follows, that such opinion is to be accounted a vain fiction.

Now all Philosophers do unanimously testify that nature forms the first rudiments of metals, out of the Astrall Spirit, and terrestrial water, by affirming that every thing may by art be reduced into that, out of which it was at first made.

And whereas metals may be reduced into a viscous water without any corrosive, and this by a due heat and digestion transmuted into more pure, and better metallick forms, tis undoubtedly credible that they proceed from hence, and not only metals, but also many stones, and mineral things, either conteining metals, or void of them, found upon the earth, and under it, have their first beginnings after the like manner, my self having seen some mine-diggers, in sandy mountains diging for other things, who have accidentally chanced upon this *Gur* or Kur, thinking it to be a Lump of Fat, one of them carryed it home, and anointed his shooes therewith, but the next

morning he found them over laid with a stony crust, and the lump or mass it self converted into an hard stone, but I am not ignorant that stones are otherwise generated, the reason how, pertains not hereunto.

A metal being reduced into its first matter like to Kur, is in the Artificers hand to induce into it, what form he lists, nor can it indeed be ever meliorated unless it be first reduced to its *prima materia*. In a solid metal, it cannot be perceived of what parts it is compounded, but being resolved, it's parts are discovered, and it being by extraction deprived of its proper Soul, wherein its life and whole dignity lodgeth it is no more a metal, but resembles an unshapen brittle earth, without metallick Liquability, and its whole goodness consists in a very little quantity of soul, and starry masculine seed, the remaining body being a dead and vile earth.

Finally, even this (which I have mentioned in my treatise of Potable Gold) sufficiently confirms that metals are also created upon the earth, because, that not only the solar beams being collected in various subjects become corporeal, but even the heat of our usual fires doth likewise do the same thing which the tryals of the Cupels abundantly testifies, let the Reader search and view the place. Nitre and other salts are evidently produced by the sun, in a moist earth, which thing will never be effected in a dry. And the Philosophers making mention of the melioration of metals, have always minded inceration, as exceeding necessary to their intention.

In this work, moisture is the patient, and heat supplys the place of an Agent; this is discernable in Vegetables, Animals and Minerals, there being nothing that can attain perfection, without due

moistening or endure the action of a maturating heat.

And by how much the thicker and fatter the water is, by so much the fitter for a matrix, and therein seed will more greedily and speedily stick and germinate.

But by how much the thinner, it is by so much the more fit it is to be accounted for the seeds vegetation.

Water of it self cannot be made a metal, unless it be first impregnated with seed by the stars, and gifted with a Vegetating life; which seed is the original, the soul, and life of all metals; and how much the more of such seed they have, so much the better and more fixt they necessarily are.

On this account I firmly adhere to this Opinion, That metals receive their Soul, Spirit, and Life from the Starrs, as from an universal seed, and their Body from the Water as an universal mother, and derive the diversity of Bodys, and degrees of Goodness according to the Scituation, purity or impediments thereof, and are digged out by men (for whose sake (as the noblest Creature) all things are made) with great greediness, costs, and hazards from the Bowels of the great Animal, and are prepared and elaborated for their many-fold Uses.

Let thus much suffice as to the generation of Metals; but now by what means they arrive to the utmost end of perfection and Dye, and are hindred in their growth, we will not pass over in silence.

Thus therefore the Case Stands, There is a certain time prefixt to all Creatures, how far they may come or protract their life, which predestinated time if it be cut off, and attaines not unto its scope or end, it

comes by accident and may not be imputed unto Nature, and this is done sundry wayes according to the various tempers of such enemies as they meet withal, some are hurt by the cold Air, prohibiting their growth, as is evident in Metals digged from their mines or trunks and exposed to the air, then ceasing to grow, and were they ripe or unripe Metals, so remaining, but if they get a new matrix, then as the seed of a plant on the Earth, they begin again to grow and hasten towards perfection. To some, as to Vegetables and Animals; the aire is the life, of which being robbed, they expire and Dye. The air destroys Fish, the water is their life, but the death and destruction of two-footed and four-footed Animals.

Even as all the elements have their proper ofspring which they cherish, so are they the destroyers of other things, which the rise and death of Metals clearly teacheth.

For as soon as ever (being conceived in the earth) they begin to grow, they become partakers of a certain saltish Nature, as their matrix, in which, and by which, they are afterwards perfected, wherein as long as they remain uninterrupted, they go forward, and are bettered in quality and quantity, but as soon as ever their contrary, as Aire or common Water meets with them, they are stopt from proceeding further in the matrix and Dye.

They being (because of this most subtle salt) while in being, most impatient of both *viz.* Water and Aire.

Now if the aire invades them, their life, consisting in a Volatile salt, is elevated and drawn back by the Stars: If water breaks in, they dissolve and are washed away, the matrix being destroyed by its contrary Element, whence 'tis that such Metals in their *primum Ens*, lying Embryon like, and obnoxious

even to the smallest corruption, do perish, and never attain to the appointed perfection by reason of such destructive accidents and injuries, whose tender salt is gon into sulphur, and is no more subject to the corruption of either Water or Aire. As for those that are Mature and perfect, if they are not cut off from their stock being extracted out of the Earth, from which they have no more nutriment, their sulphurious covering being laid aside, the defence and safegard of their Nature being banished, they rightly resemble a decrepid Old man, whose Radical moisture is dryed up and are dissolved and eaten up by the same Astral Salt, or Vehement Corruscation, from whence they did spring, and thus are reduced unto Nothing; amongst which, *viz.* metals, as well as amongst Vegetables and Animals, Nature observes a perpetual Circulation of Life and Death.

It sometimes happens that the diggers finding a metal excavated by the Astral salt, like to the Hony Comb by the Bees, are accustomed to say, that they came thither too late, whence it is concluded that the same corruscation is the begining and end of metals.

Tis of small moment to know who first digged up metals applying them to use; *Adam* was the first to whom GOD revealed the Art, because he could not want it.

It seemeth certain, that that which was by his successors discovered to *Noah*, and from him propagated unto us will undoubtedly be conserved unto the Worlds end, because of its great necessity and benefit.

But as this Art is profitable and useful, and noble, so it is chargable, costly, and dangerous, and also uncertain of getting gain, but yet not to be neglected on that account, it being an honest thing, and

pleasing to GOD, and managed heretofore by many Prophets and Kings, and now at length, diservedly had in great estimation by us Christians, because of its necessity.

He may well boast of earthly felicity, to whom GOD shall vouchsafe to give such a Light, of seeing by what Artifice Nature is to be holpen, and that which is superfluous and adhering to vile and abject metals every where, may be removed, and the defect supplied; such an one hath in very deed a rich and durable Mine; neither are Ghosts, Inundations of Waters, evil Tempests, unwholsome Vapours, and other inconveniences, that hinder from a purposed intention, to be feared. But verily man, by reason of the continued wickedness of his Life, being made uncapable of this high Art and Science, is compelled to get out Metals from the Earths bowels, in the sweat of his brows, and to pass over his life in cares and labours.

And thus I conclude this Tract concerning the generation of Metals, and refer the Reader, desiring things more at large, to the Third Part, wherein is accurately taught of what property Metals are, how to be distinguished each from the other, opened without corrosives, reduced into their first matter, and how by the benefit of art and fire, new and better Metals are to be generated out of that first matter.

Likewise, how they are to be examined by a far better way and manner than usual; how to be purged and separated each from the other, and also unfolding (as far as is permitted) a little Book of the most expert Philosopher *Paracelsus*, or his Book of *The Vexation of Alchymists*, whereby the honour due unto him (though much obscured by evil slanderers)

may be again restored unto him, and the whole world may know that he was most expert in natural things, and wrote very faithfully, and left unto us a large light, though observed by a very few, for the encreasing and propagating whereof, and defending it against the haters of the Light, I will enter upon the Third Part, for my Neighbour's good, for the accomplishment whereof I pray GOD, the Creator of all things, and the Patron of Truth, mercifully to vouchsafe his assistance. *Amen.*

FINIS.

THE THIRD PART OF THE Mineral Work.

Wherein under the Title of a Commentary on a little Book of Paracelsus*, called,* The Heaven of Philosophers, or a Book of Vexations*, the Transmutation of Metals are Taught in general; with an Appendix demonstrating their particular Process, Melting, Exploration, Separation, and other necessary Operations*.

A Preface to the Reader.

Courteous Reader,

I will not conceal from thee the reason why I have taken upon me in this Third Part to explain a Book of Paracelsus*, called* The heaven of Philosophers*, lest thou should'st believe I wanted matter to write, did I not encrease my Book by the Writings of other men. That Good which I have here decreed to write, I could have done even without the admixtion of* Paracelsus*'s Books,*

but this properly is the cause, because Paracelsus *in our precedent Age, published very many most elegant Books for the Publick Good, but obscure enough, and for this reason are by the unskilful accounted false, and are contemned; but yet because they are stored with* Arcana*'s or Secrets, they are most highly to be esteemed. Now, after that I had perceived the said Books to be true, I did very impatiently bear such sinister reports of this man, as blazed him abroad for one Ignorant of all things, and a Vagabond; who in very deed had but a few Equals in true Genuine* Philosophy*,* Medicine*, and* Alchymy.

He did many good turns to all, especially to the Poor, of which many Testimonies are extant; and amongst others, that Epitaph is to be seen, which is in the Hospital of St. Sebastian *at* Saltsburg*, where he was buried, and to which he bequeathed his Goods, and is graven in Capital Letters in a Marble, and erected in the Wall, the Tenour whereof I my self have read, and is thus:* Here lies buried *Philippus Aureolus Paracelsus,* a famous Doctor of Medicine, who by a wonderful Art cured those direful Diseases, the Leprosy, Gout, Dropsy, and other incurable Contagions of the Body, and to his honour gave and bequeathed his Goods unto the Poor. He died in the year of our Lord, 1541. the 24th. of *September.*

And what hast thou now to say? Had he not been such a one as is mentioned in the Epitaph, the Magistrate would not have honoured him with so eminent an Encomium. Moreover, all prudent Lovers of Truth do to this day believe, that he never had his equal: And although through the Envy of some unlearned men he is despised, yet it derogates nothing from him, for he will still remain Paracelsus*.*

And now, seeing that our Paracelsus *hath hitherto*

undergone such bitter things, and that none have dared to open their mouths against those slanderers, I will attempt the explication and illustration of his chiefest Books, and prove that he was not either a Lyer or Impostor, but most experienced in the light of Nature; and to this end will I begin with his Heaven of Philosophers*: I will not avow, that he could make heaps of Gold and Silver, (himself mentioning not any such thing, but he only discovers the possibility of the thing, which even I also will endeavour to declare, although I am ignorant of doing it in great quantities, which thing I am not greedy after) yet 'tis my contentation to be capable of discovering truth from falshood, and convince such as are incredulous, having some hopes, that by this my faithful writing, an occasion will be administred unto others of searching after and obtaining their desired end.* Amen.

The Heaven of the Philosophers:

OR,

A Book of Vexations.

By Philippus Theophrastus Paracelsus.

The Art and Nature of Alchymy*, and what is to be thought concerning it; being comprehended in Seven undoubted Rules, respecting the Seven vulgar Metals.*

The PREFACE. *Theophrastus Paracelsus* to all Alchymists and Readers of this little Book.

Beloved and Expert of the Art of Alchymy*, and all ye who promise to your selves much Riches and Gains of much Gold and Silver, which thing* Alchymy *doth plentifully teach, and ye (who being occupied about these things) would be vexed, and cannot cease until you have experienced what it gives, and what promises it performs; verily, daily Experience teacheth, that there is not one of a thousand that becomes Master of his Desire; which I will not call the fault of the Art or Nature, but the unskilfulness of the Artificer.*

Wherefore I will not stuff this little Book of Alchymy *with difficult Art and tedious Labours, as the common Alchymists are wont to do.*

(℞ ♁ melt it with Nitre and Tartar, of this take one Lot, of Gold one Lot, of Tin three drams, of Schlich one dram, of Sulphur two Lots, of Vitriol two lots; let

them flow with ☽ in a Crucible with Arsenick.) *Because also all the signs of Heaven, and the characters of the Stars and Planets, together with their changed and inverted terms and names, as also the Receptacles of the matter, and the Instruments of Artificers are usually very well known; It will not be needful to treat of these things anew in this Book, although herein are used these signs, names, and characters, when it seems convenient and profitable.*

Now here is delivered another Reason of Alchymy*, in seven Rules, accommodated to the seven Metals, after an infallible manner, although in Expressions not adorned, but undressed and simple: Yet, as to the sence, the expressions are abstruse and profound as can be; which may deservedly be called the Mistriss and Summ of all* Alchymy*; from which even the mysteries of other things may be produced, divined, and known, with many new Speculations, from whence new Cogitations and wonderous Operations, do (by examining and trying) come forth to the Light, that in many places they are even, in the Examen or tryal it self, found to contradict the Pleasures of the Philosophers.*

Likewise in this Art nothing is more certain, than that which is least apprehended and believed; and this is the only fault and cause of all various Operations in Alchymy*; whence 'tis that many suffer loss by their own unskilfulness, and so labour in vain, either because there's more of the matter, or less, or equal weight, whence the thing is more corrupted in operation and destroyed; or if the thing is truly lighted on, it is become more exalted, and tends unto Perfection.*

For the way is most easie, but is found by but very few. It's also expedient, that an ingenious man consider the Art and certain Rule of Alchymy*, whether he would make something or nothing: he ought to make a nothing,*

that he may bring something unto nothing, and that something may be again generated out of nothing; which Saying is incredible, but yet most true; Corruption makes a good thing perfect*: Yea, good cannot appear, because of his covering and hider; good also is begun whilst 'tis hidden; the hider ought to be removed and destroyed, then the good being freed, will manifestly appear in his lustre, the* Gloss*: the hider or covering is the Mountain, Sand, Earth, or Stone wherein the Metal was generated. Now every visible metal is the obscurer or hider of the other six metals.*

Because therefore that by the Element of fire Imperfect things are corrupted, burnt up, and sublimed such as the five metals, ♂, ♃, ☿, ♀, & ♄ *are; but the Perfect not at all,* viz. *the two most Noble, the* ☉ *and the* ☽*, therefore they ought to abide even in the fire, and to assume their body out of the other Imperfect metals, in which they are destroyed, and to appear visibly; which thing, how it may be done, and what helps are thereto necessary, shall be taught in the seven Rules,* viz. *What the nature and property of every metal is; what operation he hath, being mixt with others; and what he can do.*

'Tis also to be observed, that these seven Rules cannot forthwith be understood by one that is somewhat dull, at the first reading and view, a weak understanding cannot compass hard things. Hence every of these Rules wants much search and travel. Some are pufft up and proud, supposing themselves well to understand; and these things are childish, which are here delivered, and they know far better, and do plainly contemn these things of mine.

Glaub.] This Preface is of it self perspicuous, and needs not any singular Interpretation or Explication, but indeed the Process which he mentions requires a more accurate Observation.

Take Antimony, melt it with Tartar and Nitre, of this take one lot; of Gold one Lot; of Tin three drams; of Schlich one dram; of Sulphur two lots; of Vitriol two lots: let them flow with Silver in a Crucible with Arsenick.

This is the Process of making Gold and Silver, which *Paracelsus* will not have to be accounted like unto other Processes, of much labour and long time, but is confident, that by the help hereof he can get Gold and Silver with little labour, time, and costs.

'Tis not to be doubted, but that this hath been tryed by thousands, and frustrated the hope of such as laboured thereabouts; and that not without cause, they imagining that these are foolish ingredients to be taken for such work; my self have heard many of those that have made trial, to be very much displeased: By what means can gold and silver be made by volatile and preying ravenous things, such as ♁, Vitriol, Sulphur, & Arsenick are, which do not only yield from themselves no Gold or Silver, but even corrupt them, and bring them to fume, or at the least turn them to *Scoria*; my self trying this when I had blown them altogether, I found that these metalline species, as Schlich, Vitriol, Sulphur, and Arsenick did, corrupt the Sun and Moon, spoiling of its metalline form, and transmuted it into *Scoria* or dross. But now this is the thing which *Paracelsus* requires and aims at, and therefore should not by any means hinder or deterr us; he presently, for the better explication of his meaning, adds, Something ought to be made a Nothing; and again, the Nothing to be made Something; which thing the unskilful doth not heed or believe, that Metals being corrupted and made *Scoria*, when by the benefit of Art they are reduced, are by this means meliorated; which albeit

it be most true, yet are they but a very few (as he saith) who believe it to be true: and he confirms the whole process throughout the Chapter, even to the Chapter of ☿, and explains it, saying, *Corruption makes a good thing perfect.*

The Good cannot appear by reason of its covering. The hider or veil must be taken away, that the Good may be freed and become conspicuous; that also the first covering, under which metals are hidden, and wherein they are generated, is a Mountain, Sand, Stone, or Earth, all which are to be separated by fusion, that the metals may become pure.

Here the Metallurgist desists, and is clearly ignorant of any other covering. But *Paracelsus* addeth, That each metal is a hider of the other metals, which thing the Seven Rules do largely demonstrate, and adviseth the Chymist not to rest satisfied, when he hath gotten from the Mines a vendible metal, as ♂, ♀, ♃, ♄, melted from the dross, but to consult further with natural Philosophy, and to examin whether or no these are pure enough, without any adhering and deteriorating veil.

How great the difference is betwixt a rude and a vile Mineral (where the metal is largely dispers'd and commixt with much stony matter and other impurities) and a tractable metal faithfully separated, is well known. So much, and more, is the difference betwixt a vulgar and imperfect metal, and the Gold and Silver which it contains shut up in its bowels. But because the melting of metals out of their mines is, by reason of its long use, grown vile, and not esteemed an Art, but a Trade, and every where exercised, without any ones admiration; yet in its beginning, before it became so commonly known, it was worthily accompted a deep Secret, although now

disrespected. We may not doubt, but that even yet another veil adheres to metals, and may with as much facility be removed; and its inward, pure, and fixt center, Gold and Silver be melted out and separated, if the way were but known. But because men do not bestow any further Labour and Industry in searching, and the use of vulgar metals is highly necessary, we rest contented, in that metals once melted from their mines become malleable, and fitted for the use of man: Nor is this unadvisedly done, for the life of man can as little want Iron, ♃, ♀, and Lead, as it can gold and silver.

Paracelsus teacheth, That imperfect metals are corrupted and brought into a nothing, by the force of fire; which they cannot sustain or bear; but their good parts, Gold and Silver, cannot be destroyed, but in the great strait and force of fire do come together out of the imperfect metals, and mutually defend each other, the impure portion being burnt up and removed.

Now then, that the species and ingredients of this process may be understood, something must be mentioned by us thereabouts.

Thus then 'tis written; ℞. ♁ melt it with Nitre and Tartar, of this take one lot; 'tis to be noted that you are not to take the lot of the whole molten mass, but of one of the two, either the upper part being the *Scoria*, or inferiour or lower being the *Regulus*, which this flowing mixture sends downward.

But which it is, it cannot be perceived by the words; yet because *Paracelsus*'s intention here is to destroy gold and silver by the admixtion of the aforesaid ingredients, and to bring them to nothing, out of which nothing the destroyed augmentation of the sun may be afterwards by some additament,

obtained, in reducing it, it seems probable to think that the *Scoria* of the mixture is not to be taken, but the *Regulus*, which hath Ingress into Tin, Arsenick, and Schlich, and unites them with gold and silver, for it is the Property of the *Regulus*, to unite & conjoin contrary Metals and Minerals.

Tin is joined with malleable metals, and melted and suffers the fire with them, brings them into *Scoria*, the which thing Sulphur, Vitriol, and Schlich, also perform, and are here used by *Paracelsus* for no other end than to corrupt the sun and moon, and bring them into *Scoria*. But what schlich (Schlich) this is, because no proper name of Gold, ☽, ♂, ♀, ♄, or ♃, is added, no body can easily tell, for this is called schlecht by Chymists and Metallurgists when they take a Mineral excellently well ground, and washed with water, thereby separating the mineral or the rubish and stone, the heavyer, and more noble part of the metal remaining in the bottom of the vessel, which examining they thereby Conjecture the value of the metal or mineral: this labour they call a bringing into *Schlich*, or also *Secher*, and because all metals may be reduced into schlichs or calx, this word Schlich or Calx may suit with all metals, or else it may be that most small dust or powder in polishing mills, (Schleiff-muhleu) where various Iron Instruments, Swords, Brest-plates, and other Arms are Polished, and which is wont to be under the grinding stone in deep guttars destinated to that purpose, or gathered in wooden vessels, and sold to such as dy black cloaths, and is called calx or Schlich. But now whether or no, he means this or the calx of any other metal, it is uncertain, nor doth it much concern; for the Sun and ☽ may be reduced into a nothing without any of these Calces, and may be again augmented, and brought into something, as

you shall see in the following Chapters of the Transmutation of metals.

Vain was their expectation who thought to turn all these speices, thus blown together, into Gold and Silver, but yet could not get any other thing than a yellow, or spadiceous *Scoria* contrary to their hopes but the Corruscation (Blief) is most blessed and gladsome, if any one can get by reduction from a destroyed metal brought into Scoria, a most noble one and better than heretofore it was. But this destruction and reduction is not uniform, but is perfected many several ways as the following Chapters teach.

The First Rule.

Of the Nature and Property of Mercury.

All things are absconded and hidden in all things, but of all things there is one which is a coverer or hider of the rest, and is a Corporeal Body, External, Visible, Moveable: all fluxes are manifest in this vessel, for this vessel is a Corporeal Spirit, and therefore all Coagulations, and Consistences are captivated and shut up therein being overcome by its flux compassed about and strengthened thereby, what this flux is, its cause and name what it is called, cannot be found, because there is no heat which may be therewith compared. The burning of the Gehennal *Fire may be likened thereunto, on which account this Flux hath nothing at all of Community or Affinity with other fluxes, which are melted by the heat of common fire, and become hard and coagulated by natural cold. These fluxings or meltings cannot thus operate with ☿, they are too weak, he values them not; hence 'tis to be observed, that the mortal Virtues of the four Elements have no ingressive*

Operations upon the Cœlestial Virtues, which Virtues we also call Quintessence, because Elements cannot either give unto, or take any thing from this Quintessence; the Cœlestial or Infernal Virtue cares not for the four Elements.

Hence note, That none of the Elements, nor any Elementary thing, be it dry or moist, hot or cold, none of these can do any thing against that Quintessential Virtue, but each hath its operation and efficacy for it self apart.

Glaub.] In this Chapter or first Rule of ☿, *Paracelsus* useth succinct but yet perspicuous words, saying, that the fluidity of Mercury ariseth not from the four corruptible Elements, but from the Quintessence, and therefore hath not any affinity with these Elementary fluxings and meltings. Now, what this Quintessence properly is, which *Paracelsus* here mentions, much might be spoken, but 'tis not so convenient at this time, my self and other Philosophers have largely treated thereof, and therefore speak not of it now.

This only I add over and above, That *Paracelsus* will have the Quintessence to be a thing not subject to the four Elements, but permanent and incorruptible, whereby he gives to understand, That seeing 'tis so, that the fluidity of Mercury hath its originality from the Quintessence, and not elementary Fire, so its coagulation is in like manner to be made by the Quintessence and not by the elementary Fires, be they hot or cold.

But now, what that Quintessence is, that coagulates Mercury, and transmutes him into Gold or Silver, it may be easily conjectured, that it is not to be sought for out of Vegetables and Animals, but to be extracted out of Metals, and ought to be much more pure, fixt, and meltable than they are.

Many are the things which *Paracelsus* hath written of this Quintessence, attributing great Virtues thereunto; he that desires it, may read thereof in his Writings. Likewise many Philosophers affirm it to be a thing reduced by the benefit of Art into the purest and highest substance. Which name of Quintessence, some there are that attribute unto that Tincture, wherewith perfections are wont to be made. By which it is evident, That by the name of Quintessence is alwaies understood the most pure, the best, and the most powerful part of a thing. But be it what it will be, 'tis clear, That Mercury is a wonderful subject, nor is to be coagulated and fixed so easily, as many have falsly believed, and tryed the contrary to their great loss.

Many are the Coals which have been vainly consumed about his fixation, and are consumed, although alwaies in vain; my self have also, though not often, handled him with a great deal of tediousness, which although not permanently fixt, yet observing therein many singular things, of which I count it expedient to relate something. In him is a most great power and virtue, most friendly to Metals; he is easily mixed with the purest Metals, and most difficultly with the impure; which denotes him to be of a most pure nature: And now, if he come to be fixed, I could demonstrate, if need were, by indubitable reasons, that a thing more pure than Gold would flow therefrom. It alwaies produceth something as often as it is added to Metals, and constrained to undergo some fire, helping them evidently, even whilst it is in its Volatility; what then would it do, if being therewith fixed, it were along while melted with them in the Fire?

This I add for the better Lights sake.

When I was in my youthful days, and saw many attempting to fix Mercury with Gold and Silver, by Amalgamation, Sublimation, Coagulation, Precipitation, and other Labours of that kind, to transmute it into Gold and Silver; my self also attempted somewhat about him, by the advice of *Paracelsus*'s Sayings, That in Saturn its Coagulation is to be found. On this account I melted in a little Crucible 6 or 7 parts of Lead, and added one part of Mercury; this I put into another Crucible where Nitre did flow, that it might be covered over thereby; in the mean while I melted the glass of ♄, (being made of 4 parts of *Minium*, and one part of Flints) in a greater Crucible, whereto I put the two former Crucibles heated to be covered by the glass. These three I again sunk into a new Crucible flowing with the glass of ♄, thinking that I should this way keep in the volatile Guest, having now shut up Mercury in so many walls, I put him to the fire, intending to fix him, and then indeed he sustained it, not being able to break through; but increasing my fire, and the Glass melting with Nitre, away he goes leaving an empty nest, and left ♄'s weight whole and perfect, which having examined, it yielded a grain of Silver heavier than the common ☽ which I believed to be Mercury fixt and coagulated, but reiterating that labour, I found it to be otherways, *viz.* that the Mercury was not it self fixed, but flown away, but yet by his occult power penetrated and meliorated the lead, that it afforded a little silver; also the whole mass of lead was hereby made black, and hardened like tin, whereby I perceived, that Mercury being a pure, meer fiery spirit, is most impatient of the Fire, and cannot be fixed without a Quintessence.

But thus much indeed it can do, if being joined with other metals, it can be so long held, as to

endure the Fire; although it presently vanisheth away, it doth in a manner change them, not by bettering them, but stirring them up by its penetration, that they may mutually act each upon the other, and receive a meliorating faculty, although without any great profit, as far as I know, but I only intend to discover its possibility, its miraculous and almost unsearchable power, for it may deservedly be esteemed a Miracle of Nature. It is a meer invisible Fire; albeit such as are ignorant account it cold, and by Art it may be made far more fiery and volatile; which I sometimes have tryed, where being often injected into a vehement fire, again and again, and received in Glasses, it hath elevated it self without any fire, and gone away into its own *Chaos*. In a word, many men have accomplished prodigious things with Mercury, but all of them without any fruit; of which more shall be spoken in its place.

The Second Rule.

Of Jupiter *and his Nature.*

Whatsoever thing is manifest, (as the Body of Jupiter *for example) the six other Corporeal Metals are therein hidden spiritually, and one more profound and remote than another.* Jupiter *partakes not of the quintessence, but of the nature of the four Elements, therefore his fluidity is manifested by a little heat of the Fire, and his coagulation in like sort perfected by a little cold, and hath communion with the rest of the metalline Fluxes.*

Wherefore by how much one thing is in nature like to another, by so much the readier is it united thereunto, if they mutually touch one another; that also which is nigh, is more efficacious and sensible; for that which is afar off, doth not enforce, nor is that which is remote, how

great soever it be, much feared. Hence 'tis that heaven is not desired, because 'tis far distant, nor seen by any one; neither is hell feared, because it is far off, whose form none hath known and seen, nor felt the Torment, and therefore 'tis valued as nothing. Those things then that are absent, are little regarded, or plainly rejected, being constituted in a thick place, for by the property of the place every thing is deteriorated or meliorated; which thing may be proved by many Examples.

By how much therefore Jupiter *is farther off from* ♂ *and* ♀*, and nigher to the Sun and Moon, by so much the more Golden or Silver-like is he in his own body, and seems more great, potent, pellucid, sensible, more fair, pleasant, notable, palpable, more true and more certain than elongated, or at a distance. On the contrary, by how much the more he is elongated, by so much the more vile and abject he is in the matters aforesaid: for things present are alwaies more notable than those which are absent: by how much any thing visible is nearer, by so much a thing invisible is more remote. Therefore it behoves the Alchymist to study how he may place* Jupiter *in a spiritual* Arcanum *and remote place, in which are* Sol *and* Luna*; and that he may take* Sol *and* Luna *from far, and bring them near, into a place where* Jupiter *existeth corporally, so that the* Sol *and* Luna *may also be corporal and truly present before his eyes in the* Examen*. For there are various labours and modes of transmuting metals from their imperfection, into a perfect state.*

To mix one with another, and again to separate the one from the other pure and sincere, is nothing else but a genuine permutation made by the labour of Alchymy. Note, that Jupiter *hath much Gold, and not a little Silver. Put to him* Saturn *and* Luna*, and the* Luna *will be augmented by the rest.*

Glaub.] Although I do not certainly know the reason why *Paracelsus* beginning with Mercury, passeth next to Jupiter; nevertheless it is very probable that he would thereby point at some singular Mystery. Here he repeateth the former sentence, saying, Every visible metal hideth in it self the rest invisibly, from which if we would reap any good, their invisible and spiritual Gold is to be taken and brought near, or to be visible; and on the contrary, the visible to be removed afar off and made invisible. But how this ought to be done he doth not teach, but leaves the Reader to search it out in his seven Canons or Rules, which are very difficult to be understood not only by a rude Tyro, but even by one well exercised: And seeing that not one in a thousand understands them, it is no wonder that his Writings have been had in Contempt.

Without doubt he aimed at our good, supposing he had written very clearly, and directed his speech in such a manner, as if he had to do with one that is skilful in the metalline nature, without having any respect to the common blindness and ignorance, whereby he received great thanks, and was highly esteemed of by all.

But what shall we say or do? 'Tis bad meeting with wicked proud men, as thou most clearly writest; yet because the unexercised, if they have even once erred, they wrack and abuse the Writer with meer slanders: Hence it comes to pass, that many desire rather to be silent, and leave unto fools their own toys and vanities: But the Case being with more accurate examination considered, it seemeth evil to be revenged on the Innocent as well as the Guilty.

As for Tin, if thou searchest into its nature and property, it is a pure (compared with the other

metals) unripe metal, abounding with very much combustible Sulphur, whereby it obtains its liquifaction and corruption in the fire: which being removed (and it may be done with a gentle fire) it loseth its metalline fluidity, and very much resembles unmelted ashes, whereto if you add another sulphur, whereby that ashes may turn into a metal; and again convertest it into ashes, repeating this labour until all its combustible sulphur being burnt up, it refuseth to go into ashes, by Calcination, and then melt it, 'twill easily give forth its gold and silver in the trial (im abtreiben.) Now, in the being mixt with Lead, it causeth a strife in a strong Fire, and getting uppermost, turns into ashes, that is to be imputed to the combustible sulphur, whereby it so being melted with Gold, Silver, Copper and Iron, it makes them brittle like to Glass, but being dispelled of that Sulphur, by roasting or calcining by Incineration or Cementation, or any other way, it doth not any more make them brittle (which thing to do is full of difficulty) but is melted with them, and most easily separated with, Venus (last sich sehgern) she knowing how by her kind and flattering words to perswade the two old men ♄ and ♃, mutually to abide each other in the fire; Gold and Silver will also do the same thing; but because they are precious and easily flow out of the Crucible, and the Work may perish, it is sufficient to use ♀, which also will give from it self its own hidden Gold and Silver, and not to take these metals which are purified with great labour, and drown them afresh in impure metals, and destroy them.

There are also other waies of purging ♃, from his superfluous sulphur, *viz.* a Nitrous fire. If filed ♃, being mixt with Nitre, Sulphur, & Sawdust, be kindled, part of the tin is elevated up into flores, and

a part remains reducible in a strong fire, which is to be so often handled the aforesaid way, till all the substance be reduced, into flores and ashes, the metallick form and nature being most plainly destroyed; after this, let the flores be gathered out of the Receivers, and the ashes elixiviated or washed, and by the help of a good Flux be reduced into a metal, which is to be again filed, sublimed, and burnt, as before, until all the Tin remains like Scoria, and will not sublime; which being melted with Lead and separated, (mit Blen amstieden und abtreiben) thou shalt find gold and silver shut up in its bowels.

Likewise pour fixed Nitre (the liquor of it) on the filings of Tin, digest it its time, supply the evaporating moisture with new Liquor, that it may be alwaies moist, but yet let it not be too wet, but like thick water. This Liquor dissolves and takes away the combustible sulphur of the Tin, and fixeth that which is incombustible, and makes it capable of enduring the fire; so that being melted with Lead, and purged (aensieden und abtreiben) it yields its gold and silver.

Another separation is thus instituted; Reduce Tin with common ♄ or *Regulus*, ♃ j. into Glass or Amausa, which keep a good while in Flux in a strong fire, (forget not the inceration of Nitre or salt of Tartar) by which labour the purer parts of the ♃ being gathered together, do give a *Regulus*, the impurer parts separating themselves with the Lead and Salt into Scoria, the *Regulus* being purged (abgetieben) thou shalt have the fixed gold and silver in the Cupel.

But 'tis to be known, that these Operations may be done without Copper, but yet will yield more ☉ and ☽ if Copper be added; not only for that the ♀ it self

gives forth its ☉ and ☽, but because Tin of it self, without the admixtion of ♀, doth not willingly let go its own ☉ and ☽. But in seeking of shelter amongst its own ♀, and withdrawing it self to the *Scoria*, is there hidden (the Labour being finished) the *Scoria* can no more attract it into it self.

♀ therefore is as it were a Receptacle, wherein the Sun and Moon collected and separated out of the mass, can defend and hide it self, and is by Chymists called a Bath or *Balneum*.

In the 4th. Chapter, which treats of ♀, a more large account is given of this labour of metalline Glass. Moreover gold and silver may be separated out of tin in this wise.

Melt common Lead in a Test (treib scherben) under a Muffle (een muffel) and being throughly hot, cast in a little ♃, and it will incontinently have Ingress, but will forthwith ascend and kindle like burning sparks and go into ashes; which must be taken off with a crooked Instrument, and more new Tin put in; which being burnt, let it be taken out. Repeat this labour so long, till all the Lead be devoured as it were by the Tin.

Put these ashes on a Test, under a Muffle, and let them be yet well heated by the fire for an hour; so that if any grains of ♄ remain, they may be made ashes, and the calcined ashes of the tin may be the better fixed. Reduce these ashes, and 'twill become a metal, which let be again made ashes upon a Test; repeat this labour, until in reduction it refuseth to go into a metal, but remains a *Scoria* and a metal destroyed; which put into an excellent Crucible, and by a Flux made of Tartar and Nitre, let it melt its due time, and the fixed Tin, together with part of the Lead, will go to the bottom into a *Regulus*; which

being washed (abgetrieben) makes manifest the gold and silver hid in the Tin on the Test. This Labour is neat, easie, and but of small charge, especially where wood and coals are cheap, the *Scoria*, from which the *Regulus* is separated, is not to be thrown away, but kept for other uses, of which we shall presently speak.

Now he that promiseth Gain unto himself from this small work on a Test, is deceived, because hereby is only found how much ☉ and ☽ is contained in an hundred weight of ♃, and what costs are expended in its melting, whereby may be computed what gains may be expected every day, nor indeed is this work (thus done under a muffle) so profitably accomplished, as 'tis in greater Furnaces, where being a greater heat of fire, a more plentiful gain is promised. And although because of many various Imployments my self never tryed, yet I will briefly delineate and describe how a large Return may be made, according to Calculation, computed by a smaller quantity.

An hundred of Tin requires 10 or 12 C. of ♄; (the work being wisely handled) the price of the Lead, ♃, Coals and Labour, being summed up, and being substracted from the ☉, there seems to remain but a very little to defray the charges. But if you look thereinto a little more narrowly, you will find a recompence and benefit arising thence, not to be despised, especially if you use Lead impregnated with ☽, which by reason of not considering the benefit and gain, remains unseparated therefrom. Likewise you may use a golden ♃, such being often found as contains as much ☉ as the ♃ costs; and you may also meet with ♄, which contains as much ☽ as the Lead is worth, but not separated by the Refiners,

because they are ignorant of this separation, which by the usual way cannot be separated with profit: and that your Labour may be the more beneficial, you may add to your ♃ some golden or silver stones and minerals, as Marcasites, ♁, Arsenick, Auripigment, Cobolt, and various Pyrites or Kisij (which because of the small quantity of their included ☉, are never wont to be melted) & let them be *scorified*, which yielding also their gold and silver, do bring in a greater profit; but especially if these Minerals having been first melted with Copper, are by the benefit of Iron (or melted with Iron) brought into *Regulus*, and their Gold reduced to a narrow compass, which *Regulus* being thrown into the Lead, together with the Tin, let be made into *Scoria*, and then their ☉ is gotten without much charge, and is depurated by the Tin. But now, if you would have this separation profitable, it is not to be done in Crucibles, but in well compact Furnaces or Hearths, whereon the bright flames running, let your metals be throughly heated or calcined, and your Calcination, Incineration, or Annihilation being accomplished, let Reduction be made in an acute Furnace, (im Stichofen,) of which thing my time permits me not to give any larger account; its sufficient to have experienced the truth thereof in a lesser quantity; any one may try his fortune in Metallick Operations.

Now, although there are more waies of separating ☉ and ☽ from ♃, yet what I have already declared seems sufficient for this time; the following Chapters, wherein the nature of the other metals is treated of, will manifestly open what I have decreed to discover concerning them.

The Third Rule.

Of Mars *and his Property.*

The six hid Metals have thrust out, or expelled the seventh from them, and made him Corporeal, leaving unto him lowest Dignity, and imposing on him the most thick hardness and labour. In this body have they manifested their whole strength, and hardness of Coagulation to be, shutting up, or keeping inward, their Colours and Nobility, with their Fluidity. 'Tis hard and full of Labour, to make a Prince or King of a Peasant, or common Fellow: But ♂ by his Vertue, obtains Honour, and gets up into the high Throne of the King: But 'tis expedient, that care be used, least hastily posting forward, he be taken. It is to be considered by what Art ♂ may be promoted to the Throne; but the ☉ and ☽ put in the place of ♂ with ♄.

Glaub.] We are come now to *Mars* in order, it being the *3d.* according to the Compute also of the Astronomers, descending from above. Now *Paracelsus* doth not attribute the first place to ♄, as the Astronomers do, but to ☿; and haply, not without great Cause, hinting hereby some singular thing. He goes on, and says *Mars* is rude, sharp, and thick, because the other Metals have cast out their most ignoble, and basest part upon him, which thing experience testifies: He is composed of hard knotty Timber, and hath in him but little good; he is sharp and churlish, and not at all to be compared to gentle, tender, and noble ♃; but if he be once freed from his knottiness, which is hard to do, and render'd tractable, he shews his Virtue, and discovers himself also to be a partaker of the Royal Blood. *Paracelsus* adds, that ♄ can take away his knots, and elevate him to an higher degree, although the Astronomers

are very much displeas'd with the Conjunction of these two, as being the Author of all evil, and have therefore inserted peace-making, and benign *Jupiter* in the middle. Now that Lame *Saturn* may polish and make crabbed ♂ smooth, *Paracelsus* tells you that there's need of Caution, lest by over hastiness, he bring loss upon himself. He stoutly resists, nor doth he easily yield, but rather busily contrives how to captivate and destroy others; yet *Paracelsus* mentions its possibility; whose Reasons, Way, or Manner, we will briefly illustrate. ♄ indeed is by Birth, fitted to wash the other imperfect Metals, and to purge them from their superfluous Sulphur, if any good doth accidentally adhere unto them, but knows not how to remove their radical, and innate Impurity; and that it is not alone sufficient for this thing, the trial of the Test witnesseth; for although you add Iron to ♄, to be separated upon the Cupel; (Abgehen Lassen) yet hath it no sincere ingress into ♄; but if it be so far brought by great labour, it doth not remain, but speedily separates to the Superficies, like *Scoria*, and leaves nothing with the Lead, but what was accidentally in it, himself withdrawing with his whole power, and native goodness; Tin also doth the same; but Copper albeit it swims not upon the Lead, nor goes away, yet it is not therewith radically joined, but being reduced with the Lead, into Liquable *Scoria*, descends into the porous Ashes, of which we have accurately treated in the Fourth Part of our Furnaces, and in the Appendix.

Lead is not therefore the true washing of Metals, but that it may so become, 'tis clear that it must be aptly prepared; and if you do more exactly contemplate on the thing, you'll find it very rational; for by what means can ♄ the most liquable of all the Metals, freely copulate with ♂, which is the hardest:

Indeed 'tis true, that they enter each into the other by mutual fusion; but 'tis forcedly and superficially, not radically; as if one boils Water, mixt with Meal, into a Pulse; the Water thickens, the Flour moistens; yet neither entring into the other, radically; but the Water getting into the Pores of the Meal, or Flour, makes it Pap: In the same manner is it with ♄ and ♂, they are indeed mixt; but cannot equally sustain the violence of the Fire. ♂ doth not alter his breeding or wit; but in the melting together, remain an hard, and not easily melted Metal; nor is the humidity and liquability of the Lead hereby corrected; for although they are become one Mass, yet each keeps his old Condition: but if they are so order'd, that both of them may undergoe the same Fire; then the Iron will yield, and deliver his Gold unto the Lead, and his warm Volatile Sulphur maturates the Silver, lying hid in the Lead; exalts it, and makes it corporeal, that each bestows on the other, his Goodness and Virtue; each supplies the others defects, and both are perfected; for although hard crabbed ♂ be made flow with liquid and combustible Sulphur, or a Sulphureous Mineral, as ♁, *Arsenick*, or *Auripigment*; yet is not any transmutation made, each remaining in his own Nature, without alteration; like as ☿ being reduced into *Amalgama*, with ☉ or ☽, makes no solution, only adheres unto the Gold, and easily separates therefrom, leaving the Gold to himself: But if any one know how to conjoin, ☉ and ☽ with *Mercury* radically, they would not forsake one the other; but would perfect themselves mutually in a strong Fire; so would the other Metals too, were they but radically commixt. Some one may ask, what is this radical or spiritual Commixtion of the Metals, and what I understand thereby? for Answer, They are to be so united with an implanted Love, that they

freely join together, and so remain equally, enduring prosperity and adversity; and neither of them discernible from the other, that they penetrate the shut Gates, and thick Walls, without any obstacle; that the Volatile exhales not in the Fire: that which is liquable, separates not from what is illiquable; thereby penetrating the Vessel, leaving behind it, the more fixt, or rougher part, in the form of *Scoria*: But thou mayst demand by what means I spiritualize the Metals, and radically conjoin them; what, must they first be dissolved in *Aqua fortis*, or other corrosive Spirits, and be distilled by an *Alembick*, that they may become Volatile? No, I mean not any of this; this kind of spiritualization is a meer deceitful, and cheating Labour, hindering many thousands, which otherwise would be nigher to the Truth: All the Philosophers disswade you therefrom, that you do not torment the Metals with sharp spirits, whereby instead of being perfected, they are corrupted and mortifyed radically. 'Tis madness to pour more Water into any one that is suffocated with Water, thereby to restore him to Life; this is to put the Bridle on the Horse's Tail. Now 'tis evident, that the superfluity in imperfect Metals, is their combustible and corrosive Sulphur; and by how much, the more imperfect and base they are, so much the more of a combustible Sulphur do they possess: an evident Testimony, of which we have in Iron, or ♂: 'Tis only his acid Sulphur that deprives him of every degree of dignity, which gross, acid, and vitriolated Sulphur, did he not so much abound withal, he would not contract Rust so easily; and by the attractive Moisture be so soon corrupted: and were he not so quickly rusty, he would be put to better uses, than now he is. But you may object, that you cannot conceive, how he can have such a corrosive Sulphur, whence should it

happen to him, for the Mineral, and Stones, whence he is extracted, do not appear to be impregnated with such a Sulphur; whence comes it therefore to be in him? Besides, if the Mineral did partake of such a Sulphur, surely it would never abide a Fire so violent, but it would be driven away.

My Friend, thou dost not at all understand the Nature of Metals, and for what end it was, that Nature left such a Sulphur in Iron, and the other imperfect Metals; for it is a Nutriment unto their better Parts, being like an *Embryo*, and as it were, a Covering or a Matrix, in which a noble Child is maturated, and is (after the ripeness of the pure Metal) thence excluded. For Natures intention was not, that Iron should be but Iron, but rather Gold; but the digger not willing to wait so long, and knowing the manifold uses of Iron, allows not time for it to become Gold, just like the Fisher-man (who catching a very small Fish, and the Fish desiring to return into the Water, until being grown bigger, he might the better fill the Platter) said, nay, but I will hold thee, as thou art, for 'tis uncertain, whether or no, being grown bigger, thou mayst then be found. Just thus doth the Miner do, he waits not the Irons becoming Gold, but puts it to its present use.

'Tis commonly known, that there is abundance of corrosive Salt therein, which is not combustible in melting Fire, neither needs it any further demonstration; it having been also treated of in the Annotations of my Appendix: and that thou mayst see that a Metal can preserve, and keep its volatile combustible Sulphur in a melting Furnace, I will expound it somewhat clearer: Gold having already obtained its perfection (it being a mature product) Nature hath separated this combustible Sulphur, or

acid volatile Salt therefrom; because it needs it not for any further nutriment: neither would it hold it, if it should be put unto it, but thrusts it from it in the Fire, and hath no affinity therewith, as the other imperfect Metals have.

Now *Luna* although it be not so compleatly perfect as *Sol*; yet, 'tis more perfect than the others, and hath notwithstanding, a Commerce with this sulphureous Salt; yea, so as to hold common Sulphur a very long while in a great heat, which we shall declare anon in the separation of Metals; and if ☽ (which is almost a ripe Metal) doth thus, questionless the other more imperfect ones will do it more willingly; which thing, that you may be the more assured of, incorporate a sulphureous Salt with any Metal, and continue it in a great heat; and after a few hours you shall see that your Metal will hold that Sulphur, and defend it against the force of Fire; but if a Metal be in some sort freed from this sulphureous Salt by a melting Fire, it doth again receive and hold it; Will it not therefore hold its own, wherein it was born and from whence it came forth. ♂ excells them all as to this, being not only a friend to sulphureous and corrosive Salts, but also to Vrinous which (when it cannot have acid salts) it doth by a magnetick power attract and defend these in the fire. For example; mix the filings of ♂ with Nitre and salt of Tartar, and these salts, in a melting Fire, will be fixed with ♂, and resists the Fire. Which thing is most worthy observation, and by no means to be neglected.

But to return to my former purpose of demonstrating, that Imperfect Metals are not only, not bettered by corrosive salts and spirits, but are rather corrupted: Daily experience doth prove it before the eyes, that all such as have used corrosive

spirits in their bettering of metals, have done no good at all therewith, but have, to their hurt, lost both their time and labour: whereas those that have used other *menstruums* that are not corrosive, have profited more therefrom, and have seen more than they have sought; such as those are in a way tending to dissolve metals without corrosives; to make them spiritual, and radically to unite them, that they may mutually act in, and sustain or undergo the Fire alike, and may co-operate to purity and perfection, and may ennoble themselves. Of which *Spiritualization* more shall be spoken in the Sixth Chapter, where *Paracelsus* also treats thereof. This therefore do I affirm of ♂, that he must be handled with such *menstruums* as are not only not corrosive, but contrary to Corrosives, and such as mollify and separate those Corrosives which the Metals hold in fusion, that so for the time to come they may attract no more any moisture, and thereby contract Rust, and be corrupted; but may be rather able to preserve and defend themselves against Corrosives and combustible Sulphur. But let none think, that ♂ being by this Antidote freed from its thick, earthy, and combustible, and corrosive sulphur, will be wholly turned into ☉, for 'tis the smallest part of ♂ that is good: by how much the ☉ is more noble than common ♂, by so much is the ♂, from whence the Sol is separated more vild than other Iron, and the remainder is nothing else but a most vild Earth or *Scoria*, void of all metallick fusion. The milk of a Cow or another Animal, if unmixt with water, is good milk; but yet 'tis far inferiour in goodness to pure, good, well-wrought Butter; and by how much milk is more vild than butter, by so much is the whey and acid milk from whence the Cream is separated, more vild than that which is sweet and

abounds with Cream. If generous wine be spoiled of its spirit most sweet and most excellent, by the benefit of Destillation, one part of that is better than 12 parts of wine out of which it was extracted; the remainder cannot be wine any more, but is much inferiour to good wine, as wine is to the spirit.

The like is it with Metals, which being deprived of their soul, whereby they obtained a metallick form, they can no more be malleable Metals. Therefore 'tis good to consider whether or no in the separation of ☉ out of the Imperfect metals, it will be answerable (in value) to the metal, and other Expences necessary about extracting it; but now, if you know how to apply the residue of the Metal to other uses, you may with the more confidence attempt the separation. But to return to the words of *Paracelsus*, I will shew how ♂ may, through ♄'s help, arrive to a Kingly dignity. I have before said, that there is no familiarity between the most fusile and most hard metal, but the one will be gone away in fume before the other will melt, and that we cannot want ♄ in the separation of ♂; but how it is to be handled, I will briefly explain.

Saturn of himself is liquable and volatile, but yet can be made illiquable and fixt without detriment of the Radical Moisture or Metallick Nature; so as to undergo the same Fire with ♂, and being brought to this pass, it is then fit for the separation of ♂. 'Tis many waies made illiquable (Hartflussig) but the best way is by fixed Salts, of a contrary nature to the superfluous Sulphur in ♂, and excellently well separated from the *Reguli* made of ♂; for Nitre and Salt of Tartar do not only harden ♄, but unite other metals with him, making them spiritual, and most like to transparent, soluble Glass, the which having sustained the Fire their proper time, the Agent being

taken away, and the Patient sufficiently purged, the purest part of the Metals, thus spiritually mixt together, doth by the force of ♄ separate from the other unprofitable part. The *Regulus* is purged easily, so that there's no need of separating the whole Mass by precipitation and reducing it into *Reguli*; but ♄, by his innate force, doth in its due time finish the separation or precipitation of the pure from the impure, of metals thus spiritually commixt and united. This is enough spoken concerning the way of separating gold out of ♂, by ♄, *viz.* ♄ being first fixed by salts, and made hard to melt, so as to endure the same force of Fire with ♂, or otherwise 'twill be impossible to have any thing from ♂ by the usual way of the Refiners, by the help of scorifying with ♄ (mit ansieden) and separation (abtreiben) which even as ♃ also doth not stay with common Lead in a strong fire, but separate themselves and go into *Scoria*; the which we have also hinted in the First Part of this little Book, whereto we referr the Reader. This separation of ☉ out of ♂, may be done with *Regulus* of ♁ and Nitre, and in some manner better than with common Lead, but that I do not deliver the whole Process from top to bottom, let no body wonder thereat, for then the Book would grow to too great a bulk, and I should not receive any reward the more from the Unthankful: Let it suffice, that I have declared the manner and the Species wherewith 'tis to be done; for 'tis for the sake of such Chymists as are most expert in the Fire and Metalline Works that I write, and not for the common Destillers of Waters. And as touching what may tend to illustrate what is said, it shall be supplyed with some Processes at the end of the seven Rules.

Whereas I have attributed to ♂ in the First Part of this Treatise and elsewhere, that he doth not only

unwillingly deliver his own gold, but also if any be either accidentally, or of set purpose, added thereto, he swallows it up and hides it, and will not restore it without detriment and loss. Some body may admire how it's possible for to be done so easily by ♄ and Salts; let him know that this Extraction of ☉ out of ♂ is not any the common Examen or Trial, (abtreiben,) but a true and Philosophical separation (Seigerungh) wherewith ♂ being well dissolved, is most throughly separated from his thick and hard body, concerning which, I never met with any full pregnant Processes any where. And albeit that I am not ignorant that many, yea most that read, will not have any higher thought or consideration, yet I say that there is something else hereunder; and do believe, that it is to be esteemed far more excellent than Sol it self; which that thou maist not over-much trouble thy head about, I will not be shy in communicating it also unto thee. *viz.* Out of Iron is prepared a Salt without any corrosive, which is able to extract the soul from Gold, that it will remain half dead. But ♂ will be impregnated as it were divinely, so as to be able to give forth a golden Child: the debilitated Gold will recover its lost Colour and Virtue by ♀ and ♁. Other Philosophers have likewise made mention hereof, *viz.* that ♂ will not spare even the King, out of whose bowels he will steal Treasures, and will not blush to adorn himself with the same. Concerning which Secret the most famous *Sandivow* wrote on this wise. "The Chymists know how to change Iron into Copper or ♀, without the Sun: They likewise know how to make ☿ out of ♃: Others there are that can make ☽ out of ♄; but if they knew how to administer the Solar Nature to these mutations, questionless they would find a thing more precious than any Treasure. On which account I say,

that we must not be ignorant of what metals are to be conjoined one with the other, and whose nature of them corresponds to Nature. There is therefore given one metal, which hath a power to consume the other metals, for it is as it were almost their water and their mother; one thing there is that only resists it, and is bettered thereby, *viz.* the *humidum Radicale* of the Sun and Moon; but that I may discover it, 'tis called *Chalybs*."

Thus you see, that from ♂ also some good is to be gotten, although all speak ill of him; and indeed he is wicked if he gets possession: Nor will he spare the highest Powers, from whom he will forcibly wrest their hidden Treasures, but yet by Commerce with ♀ he will again repay it in time to be distributed amongst the subjects; although the king being robb'd of his goods, looks pale upon it, yet he lays not down his Life, and he remaining alive, there is no cause of complaining, for as long as the Riches are not exported, but remain in the Kingdom, distributed amongst the subjects, he is able to receive his former majesty and splendor from his Revenues, and to gather new Riches, and preserve his kingly dignity whole and sound.

Here I foresee that our common Know-littles, in the light of Nature, will traduce me, as if I enterpret *Sandivow's Chalybs* to be common ♂, and say that 'tis not to be understood according to the Letter, but the Author would hint somewhat else thereby; but 'tis no matter, what I have written, I have written, and that not without cause. I am not ignorant, that he means not common Iron no more than I, but his inmost Magnetick force and power, or essence, prepared without corrosive, and known to few, which doth most greedily extract and transmute the soul of Gold

above all other things. And herewith we will rest and cease.

The Fourth Rule.

Of the Nature of ♀.

The other Six Metals have in ♀ framed all their colours, and the medium *of their Flux (with inconstancy) into an External body. It would be therefore profitable to hint to the understanding by some examples, by what means the visible may by the benefit of Fire be made invisible, and this again made visible and material. All combustible things may naturally be changed in the Fire, out of one form into another, as into a Coal, Soot, Ashes, Glass, Colours, Stones, Earth, but the Earth is reduced into sundry metallick bodies; and if a metal combust or corrupted with old age, is thereby become unmalleable, sharp, and brittle, let it well flow, and 'twill again become malleable.*

Glaub.] Although that ♀ being malleable more than all the metals, in and out of the Fire, is fit for all Operations, yet even this is not void of a combustible sulphur, but is radically polluted therewith, so that it will most easily, of it self, without addition of any other sulphur, be reduced into *Scoria*, and be corrupted, which corruption is occasioned by the muchness of its combustible sulphur; Gold and Silver being void of that Sulphur, are not subject to destruction. So that, although they undergo the Fire a most long season, yet go they not into *Scoria* like the other imperfect bodies; and for the reducing of them into ashes, combustible sulphur must be added; whereas the imperfect metals too much abounding with the same, are changed by a most light heat into Ashes, Powder, or *Scoria*, which *Scoria's* are melted

into either transparent or darkish tincted Glass, according to the nature of the metal; which Glasses may be melted into malleable Metal, and again into Ashes and Glass, as you please, but alwaies with some loss, by reason of some combust parts irreducible into metal, the metal also remaining, as it was at first, without being any thing bettered.

He who knows how to melt Metals into pellucid Glass, by the addition not of metallick things, but of such things as have affinity with the metals, as Salts, Sand, or Stones, shall in reducing them, alwaies find his metal better than it was in the beginning: And that the Reader, for whose sake I have written these things, may the more throughly understand my mind, I will explain it somewhat more clearly. *Paracelsus* hath above affirmed, That every visible metal is an hider of the other metals lying hid invisibly therein, and that the hider is to be removed, if you would that those visible metals become visible and corporeal, which being most truly spoken, I know not what light it may be illustrated withal. The words also are succinct and easie to be understood, yet no body believes them; There's scarce one amongst an hundred that conceives what they tend unto. *Metals cannot be changed without putting off their metalline form*; for if you keep them a long time in Flux, by themselves, or joined with others, if they remain in their Corporality, they cannot help each the other, but being destroyed either by themselves, or joined with other Metals, and nourished in the fire their due time, it cannot otherwise be, but that they should be bettered, for so long as it retains its metalline form, it cannot be holpen. 'Tis necessary that a hard body be broken and annihilated, before there can be made a separation of the pure from the impure.

But this is to be done by a genuine Chymical manner, and they are to be dissolved and throughly opened, with things of affinity with them, whereby the purer parts may be united, and the more gross may be separated. If a metal be forced with a most vehement Fire, its parts do firmly hold together; for if it be fixt, then the parts abide in the Fire; but if volatile, then the parts thereof fly away together, their natural bond holds them together, defending them against the Fires power, but dissolve their bond, and then they are compelled to submit to *Vulcan*'s Force and Empire, and will let you make of them what you please. It may well shame the Chymists to work so disagreeably with Nature, and may well learn by the Husbandman's labours to send for Nature's help. The Husbandman therefore, when he sows his seed, to have a good Crop therefrom, he casts not his grain upon any sort of earth, without consideration, but chuseth such earth for each proper seed, as being well dung'd, may suit best therewith, and in a convenient season sows his grain, that it, being putrefied and annihilated, may be multiplied, he leaves it to the warmth of the Sun, and to the vivifying Rain to concoct and maturate it; well knowing, that without precedent putrefaction and loss of its form, it cannot be multiplied. He likewise knows, that when it hath arrived to its maturity it must not be left in the Field, but must be reaped, and then the better and more heavy part is to be fanned and separated from the lighter and worser part, *viz.* the Chaff; the which operation is, by Experience and long Use, known to be good and needful. This Process must a Chymist observe, for one Metal may be made the field of another, wherein putrefying, it may get it self a new body, which being done, he must likewise know how to separate the new body

from the *fæces*, from which 'tis gathered and made; and how to fan *Vulcan* like the best and most ponderous, from the lightest, for both of them will be made better by the foregoing preparation, and the annihilation of the bodies. When a Country-woman intends to separate the better part of the Milk from the more gross and cheesy part, she puts it in a quiet warm place, that the best part may rise up, and the worst part go down; the which being as yet not sufficiently purified, she adds her art, and puts it into a Churn, and doth so long stir or agitate it until another separation be made of the pure from the impure, which we call *Butter*; which notwithstanding, had it lain never so long by it self, had never come to have been Butter, without the Hand and Art of the Country-woman. Who would believe that in Milk there lies Butter, if he did not daily see it? This separation of the Butter from the waterishness, proceeds from the quick shaking and agitation, whereby the Milk heats; and if it doth not fadge, then do they put thereto some warm moisture, which uniting it self with the moisture of the Milk promotes a separation, for heat alone is the meer cause of hastening the separation. This now may seem a gross Example to the Ignorant, but let none imagine that this separation of the Butter from the Milk is alledged in vain, but rather to show the way how out of imperfect Minerals the golden and silver milk or part, is to be separated by the access or addition of a warm Mineral water, and by the Fires agitation: Even as warm Water helps the moisture of the Milk, that so it doth the easier separate its own heterogeneous Butter (and yet the way of separating the Butter from the Milk, without agitation, by the affusion of a warm thing and coction, is not unknown;) so also the Metals are separated, if they are along time boiled

with their own Water.

Now, because of themselves they are compact bodies, if you keep them in Flux a long season, they remain compact, and are not able by their own power to shew forth their Good or Evil, nor make it appear, whether or no they contain Gold or Silver: They are to be a long time boil'd with Water, that being dispersed, they may be translated out of their metalline nature, and the pure (by the agitation of the Fire) may be separated from the impure; which purer part of the metal doth not swim at the top, like Butter, but settles to the bottom like a *Regulus*, after the metallick manner, and all being cool, it must be separated from the *Scoria*, and in a Cupel be washed to the utmost purity (abgetrieben).

But now 'tis worth the while to know what Water this is which is fit for this Work, and makes a separation of metals; for seeing that it must have power to dissolve metals, it's expedient that it be a friend unto them, and of the same kin, or (that I may speak clearer) 'tis fit that it be their dissolver and examinator; and this old *Saturn* hath power to do, out of which it may with small costs and labour be prepared; but the common *Saturn*, although it be called the Water of Metals by all the Philosophers (but in the usual washing in the Cupels 'tis not found so to be) yet as long as it remains in a compact metalline form, 'tis unfit for this thing; let him first be made Water himself before he reduceth the metals into water; which work is easie, of small cost, and of a few hours labour, and it goes into Water, and the Metals are thereby washt. Of which more shall be said in the following Chapter of ♄, and elsewhere. This also is to be noted, That if Copper being dissolved with the Water of Lead, be digested its

proper time, the moisture dries, and the metal is hardened, and returns into a metallick body; therefore the Solution is to be kept alwaies liquid by the affusion or pouring on of new water, lest the mutual action be hindered, which the Philosophers call *Incineration*: Which being neglected, all the Work doth not presently perish, but there remains most elegant *Amausa*, and tinged Glass, which shines among the Copper, giving out from it self a Blood-red Colour, wherewith not only wooden Vessels may be adorned, but also Glass-Painters may use it; of which red Glass there hath been some found in old Churches; but 'twas believed that the Art was throughly lost; but this came not by chance without doubt, but was purposely concealed by those whose practising hereabouts did perceive a better thing to lie under it; for the red *Amausum* or Glass, being burnt its proper time with a strong fire, gives a *Regulus* yielding in the Leaden washing (im abtreiben) good Silver. But if you seek for ☽ out of ♀, it's better not to make the red *Amausum* or Glass at all, but to keep on with Inceration, that it may not come to be red, but may remain a pellucid and green Glass, even until ♀ be well washt.

Moreover this is to be noted, That ♀ and the other metals are not only reducible into soluble and insoluble Glass, by this *Saturnine* Water, but the same is to be done by the addition of clean Flints and Salts, by which they are made much fairer than those done with ♄; but in the separation (Seigerungh) they are vilder, because the Dissolvent is not so metalline, and after purgation, they do not so easily give their *Regulus* as those that are done with the Water of ♄. There's also another way, by which the superfluous burning sulphur of ♀ may be washed, and she cleansed without the water of ♄ or of the Flints, *viz.*

with *Salt-Petre*. If ♀ or any other imperfect metal be often mixt therewith and burnt, the purer parts come together, and the combustible parts come together, and the combustible sulphur separates in the form of *Scoria*. To conclude, This separation and washing may be done by the help of other fixed Salts, but none so good as the Water of ♄. Now let the Reader know, that those things spoken in a rude stile, concerning ♀, want not their weight, even as the following Chapters will openly declare.

The Fifth Rule.

Of the Nature and Virtue of Saturn.

Thus speaks Saturn *of himself: The other Six Planets have excluded and thrust me out, who am their Examinator, from the spiritual City, assigning me an habitation with a corruptible body; for what they neither are, nor will be, I am constrained to be: My six Brethren are Spiritual, wherefore as often as I am in the fire, they pass through my body, and both I and they perish together in the Fire, the two best excepted, ☉ and ☽, who are most neatly and purely washt in my waters, and wax proud. My Spirit is Water, softning the hard bodies of my Brethren; but my body is addicted to the Earth, whatsoever I lay hold on, is also made like the Earth; and is converted into one body. It would not be good that the World should know what is in me, or what I could do; it would be better did they but know how to get that thing which is mine, and is in my faculty, they would lay aside all other Arts of* Alchymy, *and handle this thing only, which I am able to perfect. The Stone of Coldness is in me; this is the Water by which I cause the Spirits of the six other Metals to congeal into the Corporeity of the Seventh, that is to promote ☉ with ☽.* Antimony *is*

twofold, the one sort is the common black ♄*, wherewith* ☉ *being mixt and melted, is purged; this is of nearest kin to Lead; the other is white* Magnesia, Bismuth*, and nearest to Tin; being mixt with the other* ♄*, it encreaseth* ☽.

Glaub.] Here we have mention made of *Saturn*, from whence the Bath (spoken of afore) for ♀ and the other metals is prepared, and that twofold, the common and ♄, both which I have mentioned in my former Tracts, as profitable for this washing; but one is fitter for some metals than the other. *Venus* willingly enters into ♄, and may most rightly be washed and separated (geseigert) with the common Saturnine water, ♂ and ♃ will not; but ♄ receives them most greedily, holds and washeth them, which is impossible for the common ♄ to do. Yet notwithstanding *Paracelsus* seems to hint at some other thing here, speaking of the transmutation of ♄ with other metals, aiming (as I conjecture) as well at an universal as a particular transmutation of Metals by Saturn. Now Saturn also, as he is the water and washing of other metals, so may he himself be washed with Salts, which, as I shall anon declare, are his water.

But let no body wonder that I speak no larger of the nature and virtue of Saturn, whom I set so high an esteem upon; for it hath been most frequently mentioned, and after this will be; so 'tis not fit so often to repeat the same thing, one Chapter illustrates another. See such other small Tracts as I have written of Saturn, and compare them well together, and without doubt you will perceive my meaning. That which *Paracelsus* adds concerning the difference of ♄ is plain enough, and wants no illustration; for common Lead and ♄ (although much

differing in the diversity of Sulphurs) was by the Philosophers called Black Lead. Bismuth, ashy Lead, and Tin, among the ancient Metallurgists, is white Lead; which appellations we shall leave to the ancients, and say no more thereof.

The Sixth Rule.

Of the Moon*, and her Nature and Property.*

If anyone goes about to reduce ☽ into ♄ or ♂, it will be as difficult as to make ☽ (with great profit) out of ☿, ♃, ♂, ♀, or ♄. But 'tis not expedient to make vile things out of good, but to make precious things out of base and abject things.

'Tis also fit to know of what matter the Moon is, and whence 'tis risen; he that is ignorant of this, will find it impossible to make Luna.

Quest. *What therefore is* Luna?

Answ. *It is the seventh external, corporeal, material, of the Six metals therein hidden; for alwaies (as it hath been very often said) the Seventh hath the other Six spiritually hidden within it self; neither also can these six be without an external, material metal; nor can any corporeal Metal be without the six spiritual ones and their Essence. If you melt the seven Corporeal Metals, it doth nothing as to making ☉: after mixtion, each as its nature is, remains fixt in the fire, or volatile. For example, mix as well as you can ☿, ♃, ♄, ♂, ♀, ☉ and ☽, it will not therefore follow, that the ☉ and ☽ will transmute the other five, that they become ☉ and ☽: Although they are blown together into one mass, yet each remains in its own state,* viz. *if you take of the corporeal mixtion; for transmutation consists in the spiritual mixtion and union of Metals, because Spirits*

admit of no separation and mortification.

Although you kill the Body an hundred times, yet will they alwaies have another Body more noble than the former. And this is the promotion of Metals from one mortification into another; that is, from a more ignoble degree to a higher, that is Luna*, and from a better to the best, that is* Sol*; a most illustrious and royal Metal; 'tis also true, and alwaies will be, which hath been often spoken of before, that alwaies the six metals generate the seventh, and deliver it from themselves into a palpable and visible substance.*

Quest. *Now, then if it be so, that the* Luna*, or any other metal, is alwaies caused and produced from the other six, What therefore is its Property and Nature?* I answer*, Out of* ☿, ♃, ♂, ♀, ♄, *and* ☉, *no other metal can be made, but* ☽; *the reason is, because as to the other six metals, each are indued with two good virtues, which in all make Twelve: these virtues are the Silverish or Lunar Spirit, which in brief understand thus; Silver is compounded into a corporeal Metal, out of the six Spiritual Metals, and their Properties, in number twelve, and is likened to the seven Planets, and the twelve Cœlestial Signs; for the* ☽ *hath from* ☿ *the Planet, and* ♒, *and* ♓, *a bright white flux and splendor,* ☿, ♒, ♓; *also* ☽ *hath from* ♃, ♂, *and* ♉ *a white colour, a great constancy against the fire and fixation,* ♃, ♂, ♉; *from* ♂, ♋, *and* ♈, *it hath hardness, a good clangour or sound,* ♂, ♋, ♈; *from* ♀, ♊, ♎, *it hath the means of Coagulation and Malleability,* ♀, ♊, ♎; *from* ♄, ♑, ♏, *it hath a fixt body with heaviness and gravity,* ♄, ♑, ♏; *from* ☉, ♌, ♍, *it hath a sincere purity, and a great constancy, against the violency of the fire,* ☉, ♌, ♍.

Thus is briefly explained what is the exaltation and cause of the spirit and body of Silver, with its own compound Nature and Essence.

It must also be known what matter the metallick spirits do take in their first Nativity, when they are carried down into the Earth from the Cœlestial Influences, viz. *a vile Dirt or Stone, which the Mine-digger by breaking the body of the metal, destroys and burns in the fire, in which mortification the metalline spirit assumes another body, not fryable, but pure and malleable. Then the Alchymist coming, destroys this metalline body, kills and prepares it by Art, but that metallick corporeal Spirit makes apparently conspicuous, another more noble and much more perfect body, whether it be the Sun or Moon; then both the metallick Spirit and Body being perfectly united, are free and safe from Corruption by the Element of Fire.*

Glaub.] *Paracelsus* in this Sixth Chapter repeats the words which have been oftentimes afore mentioned, *viz.* That every visible metal is an hider of the other metals which lie spiritually hid within it; withal teaching, that it is impossible for corporeal metals, although melted together never so long, to be meliorated, unless they are first made spiritual; which I have oftentimes demonstrated and shewed to be the very Truth, and the right way to Transmutation.

But he doth not in express words teach the way by which they may be made and rendered Spiritual; nor is it convenient to chew a Morsel, and thrust it into the mouths of the Ignorant.

Now I say, that as touching the spiritualizing of Metals, *Paracelsus* doth not advise that Metals be dissolved in corrosive Spirits, & digested & destilled over the Helm with it, by often Cohobations. The Spiritualization which he mentions here, is not to be done with Corrosives, for they are rather corrupted by them than perfected, neither in Glasses, but in

Crucibles, and that in a few hours, without Corrosives, whereby they are so depurated, and as it were poudered, that they are transparent in and out of the fire, and dissolvable in any water. This is a true spiritualization of metals, and gainful if it hath the said Properties: 'Tis otherwise called by the Philosophers, the first matter of Metals, and at this time known but to few.

Our Laborators now adays know not any metallick spirits, but such, as by the help of peregrine and noxious things, they drive over by an Alembick or Retort; but Experience testifies, that these are wholly useless and unprofitable for Melioration. And although the ancient Philosophers write, Make the fixt volatile, and the volatile fixt, yet they mean not that the metals should be destilled. Which sublimation or destillation they did not meddle with, but all their metallick labours, as *Solution*, *Putrefaction*, *Destillation Sublimation*, *Calcination*, *Inceration*, *Cohobation*, and *Fixation*, were done in one earthen vessel, without Corrosives; nor did they weary themselves with those ridiculous labours that are done by the means of Glasses. But of this more in another place.

Now read diligently over and over again what *Paracelsus* writes at the end of the Chapter, and it will appear, that he speaks of fusion, and not destillation in Glasses; where he shews, that a metallick spirit at its first descending from the stars into the earth, hath a most vile form, like a stone, or dirt, which the digger of it melts with a strong fire, whereby it gets a better form, and becomes a malleable metal. And here he is at a stand, and cannot proceed any farther. Now, saith *Paracelsus*, the Alchymist comes and takes this metal, and by his

Art destroies the metallick body, killing and preparing it; and by his labour it assumes a more noble and fixt body, called (because of its maturity) Gold or Silver. The ☽, although it be more pure and excellent than ♀, ♂, ♃, and ♄ yet having not arrived to maturity, it is (in comparison of the ☉) like a flower, which is more excellent than the herb, but inferiour to the seed, which is the most perfect part of the same. And, as in Vegetables the flowers are indued with a more elegant colour than either the seed or fruit: So also is the ☽ more abounding with Tincture than the ☉; which I have very often tried, and could demonstrate by many Examples; contrariwise, altho' the flower be, as to the form, colour and odour, above the seed, yet in goodness and durability it is much inferiour; for the flower at an approaching cold falls away;, but the seed endures, and if it be helped, it produceth a new herb, flowers, and seed, by which its species are conserved and propagated. And as in Vegetables the herb is the greatest part, the flowers less, and the seeds least, so in Minerals is the like order most fitly observed: for should Nature produce only Flowers and Seeds with the Herb, whence would there be Grass for Beasts, whereby they might fill their Bellies, and so yield dung for the Country-man to dung his ground withal, that it might produce a new Crop of Herbs. Without doubt there's more Tincture hidden in ☽ than in ☉, the inmost part of which is a meer redness; but the centre of ☉ is a most fixt and splendid Sky-colour, which is to be well observed. As for the other Properties of ☽, which are most frequently known, 'tis needless to mention them; as to purity and fixation, 'tis nearest to ☉, and therefore in metallick things 'tis to be likened to a Flower: 'Tis plainly void of combustible and preying Sulphur; but being not as

yet arrived and concocted to perfection, it is a most suitable Vehicle to extract ☉ out of volatile and unripe Marcasites, and other auriferous Minerals, and to make it corporeal. Concerning which I have formerly written, and will write more hereafter.

The Seventh Rule.

Of the Sun*, its Nature and Property.*

Corporeal ☉ is the seventh Metal of the six spiritual ones; in it self it is a meer Fire; but the Reason of its being outwardly of an elegant, yellow, visible, sensible, ponderous, cold and malleable body, is, because it hath in it the coagulation of the other six metals, whereby 'tis compell'd into a visible body. And as to its being melted with Elemental fire, 'tis from hence, because it hath a fluidity of Mercury, ♓, and ♒, spiritually hidden in it self; the which is also outwardly evident, because it is most easily mixt with the ☉, and detained by him.

And whereas after melting, it grows hard by the Cold, viz. *is coagulated, and grows stiff, that comes from the other five metals, ♃, ♄, ♂, ♀, and ☽; in these five metals the Cold dwells and bears sway, and therefore ☉ cannot be fluid out of the fire, because of Cold. Nor can ☿ with his heat, nature, and fluidity help him against the five cold metals, for its heat sufficeth not to keep the ☉ in perpetual flux, so that it is enforced to obey the other metals rather than one only, ☿, who (as to coagulation of metals) hath nothing to do, its Property being to make liquid, and not hard: It is the work of heat and life to make liquid, but cold is the cause of hardness, stiffness, and unmovable, being therefore likened to Death.*

For Example. *If you would reduce the six cold metals to fluidity, whether it be ♃, ♀, ♄, ♂, ☽, ☉, it is to be*

done by the heat of the fire, for metals are not melted with cold Snow or Ice, but are hardened thereby. Now, as soon as they are melted by the fire, and that the heat ceaseth, the cold rusheth in, whereby the metal stands still, grows stiff, dies, and remains immovable. And because that ☿ is alwaies fluid and living, tell me, I pray, whether or no such a thing proceeds from heat or cold? Some or other may say, it is because of its cold and moist nature, and that it is living because of Cold; but whoever saith thus, and believes thus, is ignorant of Nature, and deceived and seduced with the vulgar, whose belief of any thing is out of the right way, & amiss, & are therefore to be avoided and shun'd by him that would truly know; for ☿ is not living, by reason of cold, but because of its heat and fiery nature, as all things else live because of heat, for heat is the cause of life, and cold the cause of death.

But that ☉ is in it self a meer Fire, not alive indeed, but hard, shewing its fiery heat only outwardly, as yellow mixt with red, and the other five metals, are cold, viz. ♃, ♂, ♄, ♀, *and* ☽, *giving their virtues to the* ☉, viz. *according to their frigidity a body, by their fire colours, by their siccity hardness, by their moisture weight or heaviness, by their resplendancy sound; and that it is not combustible, and to be destroyed by the Element of Terrestrial Fire, that is by reason of its fixedness. Fire doth not burn Fire, nor destroy it, but Fire joined to Fire becomes the greater and more powerful in strength. The Cœlestial fire descending from the ☉ upon Terrestrials, is not such a fire as is in Heaven, nor such as our fire is on Earth; but with us the Cœlestial fire is cold, a rigid and congealed fire; and this is the body of Gold, and therefore we cannot tame or master ☉ with our fire, we can only divide it and melt it, as the sun dissolves and melts snow, congealed ice and water. Wherefore it is not permitted for one fire to destroy*

another, because ☉ it self is fire, and in Heaven it is resolved, but with us it is coagulated.

Gold is in a threefold state with its Essence.

1. *The Cœlestial*	*is*	*Resolved*
2. *The Elemental*		*Liquid.*
3. *The Metallick*		*Corporeal*

The End of the Seven Rules.

Glaub.

We are now come to ☉, a kingly and most excellent Metal, the which *Paracelsus* compares to a meer absolute Fire, and so 'tis found to be, if it be separated into parts; 'tis likewise endued with a seed-like nature, more hot than the Herb it self or the Flower. But to what end should we write of bettering it, when as it needs it not, being already constituted in the highest degree of perfection, and Nature not being able to promote it to an higher degree: Now then if it be to be made better, 'tis behoveful to make it Medicine, for never was a more excellent metal than it seen. An Herb planted in a fruitful soil, and brought to its perfection by the heat of the Sun, the seed being ripe, it remains not in the same form, but withers, and the seed falls away; but if it be seasonably gathered, it lasts a long while, and may, at your pleasure, be put into the Earth, for the production of new Herbs of its kind; or else it may be used for the health of Mankind, having no other notable Use besides. In like manner, Gold having

arrived to its perfection, if it be to be farther advanced, it must be made Medicine, or be put upon the Metallick Earth, as Seed is on the Common Earth; where putrefying or augmenting, or growing, it may exhibit and produce a metalline Off-spring. Every body knows that a good Medicine may be thence made, and that various waies, but few know the manner how; but that 'tis able (like the Vegetable seed) to make Encrease out of the imperfect metals (being its own Earth) *Paracelsus* teacheth in this place, and many Philosophers witness the same, which is not only true in a particular melioration, where by attracting its like out of the imperfect metals, it is encreased; but 'tis also to be believed as true, that from it may be separated, by the industry of a skilful metallick Philosopher, its inmost Vegetative power and purest portion (all its husks, or outside, wherewith 'tis cloathed, being laid aside) and may thereby be exalted to a more than perfect estate, although 'tis incredible to many, yet 'tis not in the least to be doubted of, except we would make all the Philosophers to be Lyers.

As for my self, although I never set my hand to so hard a Task, yet I believe and affirm it to be in the nature of things, as having evidently observed by my other metallick Labours, that this Medicine is in the possibility of Art; the which I will also in due time set upon, if God give Life and Leisure. What the other properties of ☉ are, and by what means good Medicines may be prepared therefrom, I have spoken thereof in many places of my writings, and in its proper place more also shall be spoken. And here we rest and conclude this little Book of the Rules of the Seven Metals.

GOD and Nature make nothing in vain.

The Eternal City of all things (there's an Eternal place in all things) without time, without beginning, and without end, is every where essentially. It operates in that wherein is no hopes, and that which is accounted impossible, unexpected, incredible, and plainly deplorable, will be true even to admiration.

Glaub.] *Paracelsus* having finished his Seven Rules of the Properties of Metals, begins after a sort, to repeat and illustrate his sentiment or opinion, comforting the Operator, lest happily he should be discouraged, if his affairs do not presently meet with good success; but let him ingeniously proceed, because *Nature makes nothing in vain*; that which is least of all believed, comes most of all to pass; his words are clear enough of themselves.

Item. *Note now some things on* Argent Vive.

Whatsoever whitens is of the Nature of Life, and of the Property and Virtue of Light, which causeth and makes Life. The Fire with its heat gives birth to this motion. And whatsoever blackens, is of the Nature of Death, of the Property and Virtue of Darkness, (having the efficacy and force thereof) which causeth Death; to the which hardening or induration the Earth with its Cold is the coagulation and fixation. The House is alwaies dead, but the Inhabitant is a living Fire: If thou hast found out the true Use of Examples, thou hast overcome.

Glaub.] Paracelsus speaking here of Mercury, mentions Fire, which by its heat is the cause of Light and Life, but that which blackens, is the cause of Death; where making as it were a pause or stand, he adds these pregnant words.

*Sacrifice the fat Vervein (*or Sulphur*).* ℞ *eight lots of*

Salt Nitre, four lots of Sulphur, two lots of Tartar, mix them, and let them flow.

Glaub.] Here begin the Complaints of the Alchymists, because *Paracelsus* writing of so good a matter, doth so suddenly break off, adding such a Receipt, as in their judgment hath no affinity with Mercury, but is to him as a thorn in a man's eye. This powder indeed is a good fusile powder, for the reduction of such metals as are otherwise hard to melt; but in this place 'tis meerly vain and needless, because ☿ by his innate fiery power and heat, doth alwaies flow; wherefore we want not this Flux for him. Had he written in this place, how he (*viz.* ☿) is to be coagulated and fixed, we would most willingly have heard him, and as willingly have been content that he had kept his fluxing powder to himself.

Such as these ought to blame themselves and not *Paracelsus*, that wish'd well unto them. The words which went just before, may excuse him; for he said, that *GOD and Nature made nothing in vain*; whereby he intimates, that this powder is not so strangely to be look'd on, as if it did not pertain to ☿, who is more than enough fusile already, and wants it not. Nor was this mentioned to vex the Alchymist; no, *Paracelsus* knew this nimble fusile powder, and its operations upon the metals, better than he that complains thereof, ('tis of incredible benefit in the metals, did any one know how to use it) and he placed it here, that we might perfectly learn its highest force and efficacy upon the metals; the which thing his foregoing words do also admonish us of: It operates beyond hope, that which is judged impossible is unexpected, incredible, and desperate, will prove true to admiration. Wherefore, think you, would he have added this fire had it not been

needful in this place? doubtless he knew how to burn the wings of ☿, and thereby to stay his flight. And although I know not how to fix ☿ herewith, yet have I experienced wonderous things as well in the metals as ☿, for if the metals, especially ☿, be Philosophically joined herewith, sublimed and destilled, they afford wonderful *Menstruums*.

It's also here said, *Sacrifice the fat Vervein* (or Sulphur). 'Tis full well known, that the superfluous Sulphur in metals that are imperfect, is the cause of their baseness, and this fire is able to burn it up, but 'tis impossible that all should know it; there's need of use and diligence, if you desire *Icarus*, flying with his Father *Dædalus*, and approaching too nigh the Sun (whereby his wings being burnt, he tumbled down into the Sea) should be drowned in the waters. The which let suffice, for there's enough spoken unto a wise man; let us therefore proceed.

What is to be determined concerning the Coagulation of ☿.

'Tis not at all expedient to kill ☿, to coagulate him, and then reduce him into ☽, and to weary him with many sublimations and other things, for this is but the destruction of the Sun and Moon that is in him. There's another more compendious way, whereby ☿ is made ☽, of small cost and charge, without any labour of coagulation: Every man reads in the Writings of the Alchymists, such Arts as are mean and vile, and easily preparable, whereby in a short time he might make abundance of ☉ and ☽, and are tired and vexed with the Writings of such as do not teach them clearly and plainly, and would willingly hear this, viz. *Do so and so, and thou shalt have good ☽ and ☉ to inrich thee.*

But good Sir stay a while, and wait till the Secret

be plainly opened to thee in positive words without any labour; so as to enable thee (in as 'twere a moment of time) to take ♄, ☿, and ♃, and make *Sol* and *Luna* thereof. The Art will never be so easily known, how short and facile soever it be in it self.

Glaub.] *Paracelsus* goes on, and saith, That 'tis not needful to coagulate ☿, that ☉ and ☽ may be thence made, and that it is to be done with a most easie labour, and therefore few words are best. And here *Paracelsus* is to be compared to that Rich man, who having heard that many perished with famine, 'tis said that he should answer, That before he would be tormented with hunger, he would rather feed on rusty Bacon and Pease, believing that all abounded with this fare; the which they despising by reason of their daintiness, deservedly perished. In like manner the good *Paracelsus* believed, that all Chymists were his equals, as to the knowledge of Metals, not dreaming of the many poor Colliers that torment ☿ by their solutions, precipitations, sublimations, resuscitations, fixations, and other labours; when as they are ignorant of what it is, what abounds or is wanting therein, and so for want of knowledge, toil and labour to no purpose: ☿ is a subject of wonder, and is frequently wont to deceive the Alchymists, whom (*viz.* ☿) if you would on the other side deceive, when you pursue him, give him a little breathing (because by force he's not to be compell'd) that he may a little wander about, but trust him not too much, lest flying away, he leaves behind him an empty Nest. For which Work the first Furnace, with its many Glasses, very well fitted and united, will serve excellently well. But in few words, 'Tis a subject of an inexhaustible wonder, the which I alwaies found the most stubborn of all the metals, that I have bestowed grievous pains about; but yet

do believe, that he that knows rightly to deal with him, will reap a benefit from him not to be contemned. But who is there that discovers the Way? Wonders must alwaies remain unknown unto us, and albeit we know not all things, yet let us acknowledge the great Mercy of GOD, and give Thanks to Him for that which we do know.

The Receipts of Alchymy.

What shall we say of the many Receipts and the various Vessels, such as are the Furnaces, Glasses, Tests, Waters, Oils, Salts, Sulphurs, Antimonia, Magnesia, Salt Nitre, Alume, Vitriol, Tartar, Borax, Atramentum or Copperas, Orpiment, Spume of Glass, Arsenick, Calaminaris, Bole-Armoniack, *Vermilion, Calx, Pitch, Wax, Lute of Wisdom, Powder'd Glass, Verdigrease,* Salt Armoniack, *Soot, Rosin of the Pitch-tree, Chalk, Mans-fat, Hairs, Egg-shells,* Lac Virginis, Ceruse, Minium, Cinnabar, Vinegar, Aqua-fortis, Crocus Martis, Elixir, Lazure, (ultro-Marine) *Soap, Tutia,* Havergold, *Crystals. What likewise shall we say to their preparations, putrefactions, digestions, probations, sublimations, calcinations, solutions, cementations, fixations, reverberations, coagulations, graduations, rectifications, amalgamations, and purgations. Most Books are fully stufft with these Alchymical things, as also what things are to be done by the benefit of Herbs, Roots, Seeds, Woods, Stones, Animals, Worms, Bone-Ashes, Cockle-shells, Muscles,* &c.

All these things are the Labyrinths of Alchymy, *and are great and but vain Labours. Moreover, although* ☉ *and* ☽ *might be made by the means of these things, yet by reason of the multitudes of them, the Work is rather hindred than advanced; and therefore it cannot be truly learned from the aforesaid things, how to make* ☉ *and*

☽. *But all such things are to be omitted, as operate not with the five imperfect Metals, for the production of* ☉ *and* ☽.

What therefore is the true Way, and the short Path void of all difficulties, that leads to the speedy making of good Sol *and* Luna*? How long will it be ere thou revealest it? I believe that thou understandest nothing of this matter, may somebody say, but dost only mock us with these Riddles.* For answer*: It hath been already spoken of, and is evidently enough discovered in the Seven Rules; He that understands not, let him blame himself. Besides, let no body be so mad, as to perswade himself, that the Art is most easie to be understood, and to be perfectly known by the vulgar; that is neither so, nor must it so be; but it will be better understood in an occult and hidden Sence.*

This is the Art, viz. *If you make the Heaven or Sphere of* ♄ *to flow with life in the Earth, put in all the Planets, or which you please of them, but let there be of* Luna *least of all; let it flow so long, until the Heaven of* ♄ *doth wholly disappear, and the Planets remain alone dead with their own corruptible Bodies, and have assumed a new, perfect, uncorruptible body, that body is the Spirit of Heaven, by which the Planets become again corporeal and alive; as afore, Take out that new Body from the Life, and out of the Earth, and keep it, for it is* Sol *and* Luna. *And thus hast thou the Art plainly uncovered and intire; if thou dost not yet understand and apprehend it, 'tis well, for so it must be; nor must it be publickly divulged.*

Glaub.] In this Chapter *Paracelsus* teacheth, That there's no need of so many ridiculous species, for the transmutation of Metals, but that there's virtue enough in the metals to operate upon, and to better one another, if they are rightly conjoined amongst

themselves; yet in some Labours we cannot be without Salts and Minerals, because they are useful to mollifie hard Metals, and to dispose them to assume a melioration. But 'tis to be observed, that Corrosives are to be omitted, and such Salts only to be used as are friendly to Metals. Likewise other Minerals and Fossiles may be fruitfully used in fusion, (Seigerungh) separation, and other metalline Operations, as additaments (als Susans). The which thing *Paracelsus* denies not, but only rejects, and that deservedly, those ridiculous Compositions of the unskilful Alchymists, which they making in their use Sol. He dehorts the studious Artist, and endeavours to bring him into the right way.

Furthermore, he teacheth but in an occult sence, how good *Sol* and *Luna*, such as will endure all trials, is to be extracted out of imperfect Metals; but 'tis so obscurely done, that no body can thereby understand the thing; and such only as aforehand know somewhat, and have had the like Labours under their hands, are able to understand his meaning.

Doubtless this Process hath found many an one work enough, who have at last attained to nothing; but yet some have by chance lighted thereon, and so perceived the Truth of his Words, most of which Inventions do casually happen; and whilst that one thing is sought after, and by accident lost, something is oftentimes found more excellent than that which was intended.

In like manner, most things unsought after have happened to me; and also my Labours have manifested to me the greatest part of *Paracelsus*'s Arts, and not his Writings. And who will certainly and plainly teach what lies under that Covering? Many Archers there are, but few hit the mark.

Neither seems it so necessary to take nothing else but the aforesaid Metals; the which thing *Paracelsus* also in his forementioned Process doth hint at, saying, When thou makest the Heaven, or Sphere of ♄, to flow with Life in the Earth, sow in all the Planets, or such as you please of them; but let not the Moons part be biggest, but let it be the least of all. By which words 'tis easily conjectured, that the greatest part must be of Saturn, whereby the other metals are to be washed and purified, and the least part of the Moon. But some body may ask, What reason is there for the Moon being here, she being already pure, for the washing of whom there's no need? Why this hath been already elsewhere answered thus, *viz.* That she may attract, defend, and make corporeal, the washed, purified, and tender Sun, which would otherwise remain in the *Scoria*: Notwithstanding this separation may be made without the *Luna*, but then 'tis not so gainful. Neither also is it necessary to conjoin the Metals, and so make but one work in washing them with Saturn; each of them may be taken apart, and so cleansed, unless a man knew how to contrive the composition, then indeed the Work would be facilitated, and more Sol gotten; the which is to be well observed, if either none, or very little Luna be taken. But if you take not ☽, then ♀ is to be added, as being of nearest affinity to ☉ and ☽, in its malleability, and so that will attract the volatile and immature ☉ out of the imperfect Metals, and defend it in the fire, but much weaker than ☽. Tin and Iron being most impure and sharp metals, may be washed with Lead, but with much difficulty, and may be deprived of their spiritual and occult ☉, but with far greater charges and cost, than if you took in ☽, or at least wise ♀. Now knowing this, Why do we not give to every one its proper additament, for the

expedition and enriching of the Operation? 'Tis worth the while to be able to make a good mixtion of Metals, and with profit to wash them with ♄, in which mixture none believes how much there's placed, nor my self neither, had I not with Loss learned the same. For, when in former years I sought after somewhat in this kind of operation, as washing and separation, and had sometimes found out a good *Proba*; I have gone to repeat the same labour again, and have egregiously erred. And although I have for many years wrought hard in this kind of labour, and spent much (which I repent not of) yet I dare not boast of catching the best prey, but am content with a piece of Bread, but yet I do not dispair, *Good things come slowly on*, and the thorny prickly Budds spring forth before the Roses come. Now, if thou learnest the weights the Work will be safe, and thou needest not to doubt of doing the same in a great quantity. *Paracelsus* goes on, and bids you to let the Planets which you have put in, to flow so long with the Heaven of ♄, until the Heaven of ♄ vanish, the Planets will remain, having received a new body, which is to be taken out of the Life and the Earth, which will be ☉ and ☽. And these words are variously interpreted by sundry men, especially what the Heaven of ♄ is, and are perswaded, that if that were known, the residue of the Process they could state well enough. Many understand hereby the common separation made by a peculiar ♄, taking the *Regulus* Stellate of ♁, which is stampt with a Cœlestial Star, the which they blow on and melt with the Life, (which they interpret to be the fire) in the Earth (a Cupel or Test treibscherben) the bodies being left upon the Test, like mortified Metals, the which reducing by a fusing addition, and melting with Lead, (angesotten) and promising themselves Gold

and Silver, they find themselves to be in an errour, and accuse *Paracelsus* of Sophistry and Deceit, because they can't make good quantities of ☉ and ☽, by means of his Writings.

And now, what this Sphere of Saturn is, may be variously explained: It may not unfitly be taken for common ♄, because being fused, it shines, and is turned round: or it may be taken for its Glass, which being melted in the fire, shines like the Sun: or it may be the Stellar *Regulus* of ♁, because its *Stria* represents Stars when 'tis broken. But what benefit is it to know the Heaven of ♄ and to be ignorant of the true requisite Life, and the reduction of the dead and reducible bodies. Common Fire is not the Life that *Paracelsus* mentions, but it may be stirred up thereby; and so he saith; The fire with its heat, is the Nativity to this motion: If by the Elemental Fire he should mean the Life, and by the separation of ♄, or blowing of the *Regulus* of ♁, (the flowing which *Paracelsus* mentions) then it must necessarily follow, that the destroyed bodies which remain, should be made more perfect, and the Spirit of Heaven should yet remain with them; for thus he writes, *viz.* The Planets by it do become corporeal and living, as they were before; but in these kind of separation, scorification, or blowing off, it is not found so to be; but in these Operations their Bodies remain like *Scoria*, in which is neither spirit or life, much less ☉ and ☽ to be found, though never so diligently sought after. *Paracelsus* saith expressly, *viz.* That Body (*viz.*, of the slain or kill'd bodies) is the Spirit of Heaven, by which the Planets do again become corporeal and alive as before; from whence 'tis to be understood, that those bodies are spiritual, & not only corporeal and resuscitated, but such as may give life even to slain or destroyed bodies, the which can't be said of

them, for a spirit must be penetrative and vivifying, and they are not such. For if (according to *Paracelsus*'s mind) the dead bodies ought to be reduced to Corporality and Life, 'tis necessary that they have some hidden power; (which every one knows not) whereby they may demonstrate most speedily their embodying and vivification in a spiritual manner, without the addition of any peregrine Flux, or else they are deservedly to be rejected. But if any one should now imagine, that metals being by the red fire deprived of life, made spiritual and again corporeal and living, should forthwith be all ☉ and ☽; he promiseth more to himself than is right, and is deceived (for *Paracelsus* saith, that That new body is to be taken out of the Life and Earth and kept, for 'tis ☉ and ☽) for 'tis impossible even for the Philosophers Stone, to convert the whole bodies of Metals into ☉ and ☽, for out of nothing, nothing can be made, as the Philosophers say; and Experience testifies, none but God only made any thing out of nothing; but that thing which is, may by Art be reduced into nothing, and that again reduced into something. Seeing therefore that the greatest part of metal is an unprofitable, combustible noxious Sulphur, which never was a metal, but adhering only outwardly unto them, and being combust, reduceth their *humidium Radicale* into *Scoria*; which *Humidum Radicale* only (after its destruction) and not the whole mass of Metal or superfluous Sulphur, is reduced by the spirit of the Saturnine Heaven, out of nothing unto something, *viz.* a Body and Life; the Sulphur which before the corruption was nothing, remains still a Nothing; and if thou throughly observe the thing, the Case stands clearly thus; *viz.* If in this operation there must be a separation of the imperfect metals, and a

gathering together of the more pure, and a dispersing of the more impure parts; these separated parts must therefore necessarily be much unlike one another; and by how much ☉ and ☽ is more pure, if compared with imperfect metals, from which 'tis separated: And these separated parts are not of the same Goodness and Nature; as if ten duckets were divided into two parts, each part would have 5 of the same goodness and weight. Now, if from one of these halfs you take two or three parts, and put them to the other half, it only makes the one bigger, and the other less: And if there be nine parts on the one side, and but one left on the other side, yet cannot the major part boast of its excelling the other in quality, but only in quantity: As to Goodness, they are both equal. But now, if you take a Mineral or Metal commixt with stones, and by measure divide it into two equal parts, and then pound them, and by pouring water thereon, separate the lighter parts after the accustomed manner, and the heavy Metal will settle to the bottom: Now the dross and metal will fill the former measure, but will very much differ in their goodness.

Or if any one take two measures of Wine, and by the heat of Fire, separate the more excellent Spirit by destilling in a Glass Alembick, and leave the other measure in the Cucurbit: These two parts, though equal in quantity, yet they do much differ in goodness; the one part will be more noble than Wine, and the other worser; and as the other residence is no more Wine, being deprived of Spirit, Life, Soul, and Strength, and is thereby unable to defend it self from death, but tends to putrefaction; so on the other hand, the Spirit is not subject to putrefaction, but preserves other things therefrom.

The like is to be understood of this metalline separation, for the remainder, from which ☉ is separated, can no more be made Tin, Copper, or Iron, but is a gross earthy Sulphur, by the reason of the ☉ taken thence; whereas before it was ♃, ♀, ♂, or ♄. And by how much the Spirit of Wine is more excellent than common Wine, and ☉ than an imperfect Metal, by so much also will the Spirit of Wine and ☉ excel, if they are again separated, and new fæces segregated therefrom. But this is not so necessary in this place; 'tis sufficient to have declared the way and reason of this metalline separation, about which we have even now treated, *viz.* That the whole metal, nor the ½ or ¼ part thereof, will become *Sol*, and the rest remain a metal; but the separation of the pure is very small in quantity, in comparison of the much impurity whence 'tis separated. Nor let any one think he hath not attained the Art, and so will not rest here, if all things become not ☉; 'tis sufficient if there be some gotten, and that all the Labour is not bestowed in vain.

By what means Crystals are to be Conjured, and all things to be seen in them.

To Conjure is no other thing, than well to observe a thing, to know and understand what it is: Crystal is a Figure of the Air, in which is to be seen whatsoever is moveable in the air or unmoveable. The like appears in a Looking-glass, in Crystal, and in the Waters, for the Air, Water, and Crystals, are all one to Sight; like a Glass wherein an Object is to be seen, as it were, reverted.

Glaub.] I do not fully know what *Paracelsus* intends by this Conjuration of Crystals, because it appertains not to the metalline Arts; but yet it seems

not to be here added without good reason, somewhat he would intimate hereby. We read of the Ancient *Pagan* Philosophers, that they conjured Crystals, and beheld in them many wonderful things; the which, whether it be true or no, I leave as I find it, because in my Judgment, such an Art seems not natural, but belongs to Diabolical Magick, which I have nothing to do with.

Paracelsus also hath elsewhere written of wondrous Looking-glasses of the same, and hath taught how to compose them of Metals, melted together in a certain Time and Constellation; the which many have attempted to do, but not one (as far as I know) hath attained the Mystery. It seems very probable, that he intends by this Conjuration of Crystals, that the Metals are to be made like to pellucid Crystals, Air, or Water, wherein the soul of the Metal may shine, if you would spiritualize them, and make them yield their ☉ and ☽. And in this Sence it agrees with the aforesaid Chapters.

It likewise seems, that the mentioning of this thing is necessary for the sake of those, who practising on a separation with ♄, have experienced, the Metals are to be first reduced into Transparent Crystals, before they part with their occult *Sol*: Which I have elsewhere spoken more largely of, about *Amausa*, and therefore will here end.

Of the Heat of Mercury.

They that believe that Mercury *is of a moist and cold nature, must lay down the Bucklers, for 'tis not so, but it abounds with a great heat and moisture, which being naturally planted therein, keeps it alwaies fluid: For, were it of a cold and moist Nature, it would alwaies*

*remain rigid and hard, like to congealed Water, and were to be melted like other metals, by the heat of the fire, which it (*viz. ☿*) hath no need of, because it hath already a fluidity from heat, whereby it flows, and is alwaies constrained to live, and not to die, grow stiff, congeal, or be fixed. But this is singularly to be noted, that the Spirits of the seven Metals, or of as many of them as are conjoyned in the Fire, are wonderfully provoked and stirred up, and* Mercury *chiefly, and they emit, and send out their forces amongst each other, for a mutual Victory and Transmutation; the one takes away the Virtue, Life, and Form from the other, communicating a new Nature and Form; so the Spirits or Vapours of Metals are stirred up by heat and mutual action and passion, and are transmuted from one Virtue to another, and at last to Perfection and Purity. But what else is to be done with ☿, that so his heat and moisture being taken away, he may catch a great Cold, and be congealed, stand still, and die; do as you hear in the following Figment.*

℞ *a most pure Silver Vessel, in which shut up* Mercury*, then fill a Pot with molten Lead, in the midst of which put in the Vessel with the* Mercury*; let it flow a whole day, and the hidden heat will be taken away from* Mercury*, and the external heat will communicate to it the internal cold of the Lead and ☽, being both of a cold nature, by which* Mercury *will grow stiff, rigid, and become hard.*

Note*, The Cold which* Mercury *hath need of for its hardening and death, is not outwardly perceptible, like Snow or Ice, but is rather hot. Nor is the heat by which* Mercury *flows, felt by the hands, but 'tis rather cold. Hence Sophisters (that is men speaking without knowledge) pronounce him cold and moist, and study how to coagulate him with hot things, and thereby rather*

liquifie than harden him. Which thing Experience it self testifieth. True Alchymy*, which by one only Art teacheth to make* ☉ *and* ☽ *out of the Five Imperfect Metals, useth no other Receipts, than only from Metals, out of Metals, by Metals, and with Metals, are Perfect Metals made; for with other things it is* Luna*; for in Metals it is* Sol.

Glaub.] Here *Paracelsus* demonstrates their Judgment to be false, who say that Mercury (in it self a meer Fire) is by nature Cold, and returns to speaking of Spiritual Metals, the which being stirred up by great heat of Fire, do operate upon one another, meliorate, change, and advance to perfection, as hath been taught in the foregoing Chapters. Then he adds a Fable or Story, how to coagulate or fix Mercury; but it must not be taken in the literal sence, but of the spiritual ☽, whereby Mercury is to be promoted to Coagulation, in a moist way, and not in a dry, as the other Metals are, which Process I never yet attempted. Then he finisheth with an universal Rule of Transmutation, saying, Perfect metals are made from metals, out of metals by metals, and with metals, and that out of some ☽, out of others ☉ is made. He adviseth to take no strange thing, and only metalline subjects are to be taken for this Work out of some *Luna* only; out of others *Sol* only, or ☉ and ☽, both are to be extracted, which I have often tried; as in ♄, which of it self gives only ☽, Tin, ♀, and ♂, by themselves give only *Luna*, and pure *Sol*; but commixt with other Metals in a due proportion, they give only ☉, and very little or no ☽: Which maturation is to be ascribed only to the labour and mixtion, which is deservedly to be admired.

What Matter and Instruments are needful in Alchymy.

There is no special need of any thing, excepting a Fire-place, Coals, Bellows, Tongs, Hammer, Crucibles, Test, (treib scherben) *and Cupels made of good Beech-ashes. Then put in* ♄, ♃, ♂, ☉, *Copper,* ☿, *and* Luna. *Proceed to the end of* ♄. *'Tis very difficult and uncertain to find out Metals and Minerals in the Earth and Stones; yet because all Metals are to be first sought after and digged out of the Earth, this Labour is not to be contemned, but is Praise-worthy. Nor will this lust and desire in digging in Mines sooner cease, than the love of young Men to Maids will fail; and as the Bees are greedy of extracting Honey and Wax out of the Rose, so prone and forward should a Man be, to find out the Minerals in the bowels of the Earth, but without Covetousness; he that is overmuch greedy, receives least, for God doth not fill all men with gold and silver, but with want, dung, dirt, misery, and scarcity. Some men also God bestows a peculiar Intellect upon, and a piercing knowledge of Minerals and Metals; so that they know a far more compendious way of making* Sol *and* Luna *without digging in the Mine-pits, and without the Examen or Trying, and Fusion of Minerals. So that 'tis not so altogether necessary to dig in the Earth for native* Sol *and* Luna*, but by a certain knowledge it might be made of five Species, (but of Minerals become Metals, which are Imperfect Metals, and are so called)* viz. ☿, ♃, ♄, Mars*, and* Copper*: Of some more easily, of othersome more difficultly is* Sol *and* Luna *to be had.*

Note also*, That out of* Argent Vive*, Lead,* ♃*, Gold and Silver is easily made; out of* ♂ *and* ☿ *difficultly. Nevertheless 'tis possible, but in the beginning and access of* Sol *and* Luna.

Out of Magnesia *and Lead comes* Luna.

Out of ☿ *and* Cinnabar *ariseth pure* Sol.

Likewise an Ingenious man (as I well remember) is able by due attention and preparation so to handle a Metal, as to be able by his ingenuity to do more in the Transmutation of Metals to perfection, and to guide the same better than all the Signs and Planets of Heaven can do. 'Tis also needless to observe the Twelve Signs, and to calculate the motions and Regiment of the Planets, and to observe a time, a day, the hour of this or that luckey or unluckey Planet; such things neither promote nor hinder any thing; they neither hurt nor profit ought in the natural Art of Alchymy*: But if thou rightly understandest the art and possibility thereof, then go to work and labour when thou seest it most convenient; but if thou want'st the knowledge and practice thereof, then all the Planets, Stars, and Signs will wholly fail thee. It also comes to pass, that metals lying long in the Earth, are not only changed into Rust, but by a longer staying in the Earth, they return into their Native Stone, of which sort are many found, albeit they are not observed, for there are found stony pieces of Money, of the* Gentiles*, which were Metal heretofore, and by Corruption were transformed into Stone.*

Glaub.] Here we are, in the first place, taught, that for the making of ☉ and ☽ there needs not many Instruments nor Species, but the metals are only to be conjoined, but not by the common separation or washing: For if you should wash all the metals with Lead, yet would there remain no more ☉ and ☽ than was taken at the beginning; the rest will descend with the Lead into the Cupel, and will lie at the top thereof like *Scoria*; therefore he doth again direct to a spiritual Commixtion and Philosophical Separation. Also he adds, That 'tis an honest, good, and necessary thing to dig up Metals, but that the other is

the more excellent, and that deservedly, for it separates Gold and Silver by Art from the more vile metals; for all such as apply their minds to metals, do well know with what dangers, costs, labours, and Cares, they are to be gotten out; but yet 'tis not therefore to be abstained from, especially since we labour by this Rule, of having a fore-known and certain end of our pains and work; the which cannot indeed be done in metallick Mineings, for we are frequently drawn by vain hopes to bestow all our Estates on the Mines; and having spent all in vain labour, we are at last compelled to desist from the Work; but yet if it succeeds well, they yield the more plentiful Returns; and many Chronicles of Metals do testifie, That many Poor men have, by the Benefit of a rich Mine-pit, grown most Rich and Wealthy in a few years space. The finding out of Mines therefore doth wholly consist in Chance and Casualty, where Profit and Loss are equally and alike to be expected: The Work is likewise very chargeable, and can't be set upon by every body, and therefore 'tis not for ordinary People, who have but little to lose, but for rich Men, who, though they lose much, are notwithstanding able to live, unless happily a Poor man lights upon some Earth or Sand that is very rich in ☉ and ☽, and other Metals, by the washing whereof he may get a livelihood; or else finding a rich Mine, and so betakes himself to a Rich man for his Copartner, such a one as is able to bear the Charges of digging it forth; and this is often done. But yet be it as it will, the thing is full of uncertainty. Whereas this Metallurgy, or Work on Metals, which *Paracelsus* makes mention of, is to be preferred far before the other, if any one (by the Grace of GOD) attaineth the Art, whereby he may with profit extract the ☉ or ☽ out of the already-digged-up Imperfect

metals, which are every where to be sold.

But to return to the business in hand, *viz.* To illustrate the Writings of *Paracelsus*, who deserved much of his Country. He names some metals, out of which Gold and Silver may easily be extracted, and others, out of which 'tis difficult to get it, but in both *Sol* and *Luna*, is to be added; for 'tis profitable, yea, necessary (the which I have frequently exhorted to) in the extraction of Gold and Silver out of imperfect metals, and is volatile, and may the more commodiously make it corporeal and fixt. Then he adds, That Metals, by a longer stay in the Earth, do die, and return into stones and earth, from whence they had their original. The like happens to Man, and all Creatures; nor is there any thing in the World, how glorious soever it be, but is vain, empty, and perishing, but the Knowledge, Love, and Fear of GOD alone.

What thing Alchymy *is.*

Alchymy *is an intention, imagination, and studying, or considering how or whereby the Species of Metals are transmuted from one degree and nature into another. Let therefore every ingenious and understanding man throughly consider the good Art of* Alchymy*, for he that speculates and well studies, will the sooner attain the Art and find out the Truth.*

Note, *That very much is to be attributed to the Stars and Stones, for the Stars are the framers of all Stones. And all the Cœlestial Constellations, the Sun and Moon, are in themselves nothing but stones, from which the Terrestrial do arise, being as it were their burnt part, Coal, Ashes, Outcast, Excrement, Expurgation, from which the Cœlestial Stones separating themselves,*

become clear and transparent by their proper brightness: And the whole Globe of the Earth is nothing else but a dejected, slidden down, commixt, broken, recocted Rubbish, and blown as 'twere into one Mass, having obtained Rest and Constancy in the middle Circle of the Firmament. 'Tis also to be noted, that Gemms *(the names whereof I shall presently mention) together with the other Stones, came down into the Earth from the Celestial Stones or Stars, to which they are nearest in all perfection of Purity, Fairness, Brightness, Virtue, and Constancy, or Fixity, and Incorruptibility in the fire, and are in a manner like to the Celestial stones and constellations, being parts of them, and of the Nature derived from them, and are found by men in an impure gross vessel, and are supposed by the vulgar (who judge rashly of all things) to have been there born or generated; such as are found are polished, and are carried throughout the World to be sold, and are accounted as great Riches, because of their form, colour, and other Virtues, of which I am now going to Treat.*

Of Gemms.

The Emerald *is a green Transparent stone; it helps the Eyes, succours the Memory, defends Chastity; the which being violated, it self,* viz. *the stone, is hurt.*

The Adamant *or* Diamond *is a black Crystal; 'tis called* Evax*, because it produceth Joy: 'Tis obscure, and of an Iron colour, most hard, is dissolved with Goats blood, and exceeds not the bigness of a Filberd Nut.*

The Magnet *is a stone of Iron, because it attracts Iron.*

The Margarite *is a Pearl, and not a Stone; 'tis generated in shells, and is white; for whatsoever is generated in Animals, in a Man or Fish, is not properly a*

Stone, but only in the opinion of the vulgar: It is properly a depraved (or a transmuted) Nature on a Perfect Work.

The Jacynth *is a yellow pellucid stone; 'tis also a Flower, the which the Poets fain to have been a Man.*

The Sapphire *is a Skie-colour stone, of a Celestial nature.*

The Ruby *is a stone deeply red.*

The Carbuncle *is a stone of the Sun, emits light and splendour, like to the Sun in his own nature.*

Coral *also is like to a stone, all red, it grows in the sea, on wood or a shrub, of the nature of the Water and Air; 'tis presently changed by the Air, and turns to a stone, grows red, is incombustible in the Fire, and therefore may be esteemed a Stone.*

The Chalcedony *is a stone with bright and obscure colours, with mixt and cloudy fluidities and colours, ruddy, like to a Liver, the vilest of all the* Gemms*, shining with every colour.*

The Topas *is a stone, shining also in the night; 'tis found in either rocks or stones.*

The Amethist *is a stone of a red and yellow; it shines.*

The Crysopassus *is a stone fiery in the Night, and in the day it appears Golden coloured.*

The Crystal *is a white transparent stone, like to Water congealed by the Air, and cold, (or of the Air and Cold) it is sublimated, extracted, or (as they say) washed out of other Rocks.*

And now, for a Conclusion, I will give you this most true farewel. If any one will use a right reason, sence, and cogitation towards Metals, what they are, and whence they come, let him know, that our metals are nothing else but the best portion of common stones; they

are the Spirit of the stones, that is, the Marrow, Oyl, Pitch, and Fat of the stones; but it is not sincere, pure, and perfect, as long as 'tis mixt and hid in the stones; this therefore is to be sought for and found in stones, and to be known in them and extracted from them; and then it is no more a stone, but a well-wrought and perfect Metal, assimilated to the Cœlestial Stars, the which also are peculiar stones, distinct from these stones. Whoever therefore is willing to find out metals, let him firmly believe this, and thus account, That he must not be only intent on the common Metals, nor have his hope placed in the bowels of the Earth, that so he might get good Minerals from thence, for often times there is above or without the Earth in sight, which is not in the profundity and depth thereof, and oftentimes is better, and more rich.

Therefore all such stones as you meet with, whether great or small, as great whole stones or flints are to be most accurately search'd or look'd into, and to be considered of what Nature and Property they are; for oftentimes a most vile Flint is found to be more excellent than any Cow. For the Matrix or Rock, Abbruch, *whence they are gotten, from whence such a stone did arise, is not alwaies to be earnestly sought after, that you may have more from thence, for these stones have no Rock, the Heaven is their Rock; oftentimes also the Abject Earth, Powder, and Sand, hath much gold and silver Dust,* (Schlich) *which observe.*

Glaub.] Here *Paracelsus* declares what *Alchymy* is, whose words being perspicuous enough, need no illustration: Then he leads us to the birth of metals, the which are generated in the Earth, out of the Stars above: He attributes to Gemms the nearest place of Perfection, but does not intend that we should earnestly seek after them, to have gold and silver

from thence, but that the metals should be made like them, as to their outward Aspect, and then afterwards the ☉ and ☽ is to be extracted, to which all the scope of the foregoing Chapters tend, which is to be observed and enquired into, what his meaning is: Nor are the bare Letters alwaies to be trusted to, here is nothing mentioned by him in vain. What affinity have Gems with the metals? None at all: And although sometimes the hidden ☉ and ☽ may be extracted, yet he doth not at all intend here that we should make that, but repeating the former Doctrine, he hints unto us, That the metals out of which the ☉ and ☽ is to be extracted with profit, are to be first reduced into soluble or insoluble Glass, most like to Gemms; a good Company of them he here reckons up, and adds to what use they serve; not that we might learn their Nature, Colour, and Properties, (as I suppose) but to teach us, that as they are found different in Colours and Virtues, even so may the metals be prepared into Colours like unto them. He that neither understands nor will believe, let him seek better things, and get help and assistance elsewhere.

Then at length, by way of addition, he concludes what Metals are, and that they are not alwaies to be gotten out of the profundity of the Earth, but are sometimes to be found most plentiful in most vile powder, sand, and stones; neither is it necessary to be earnest in seeking their rock or original, whereby more may be gotten, because the Heaven by its operation generates them every where: he reproves men for their blindness, because they alwaies gape after great Mines, lying deep, dangerous to be found, and chargeable to dig out. That which is laid before their feet, as it were, they disdain to acknowledge, peevishly affecting the dark, and stubbornly

contemning the light exhibited to them by honest men, and by an innate malice they study to extinguish it. And thus is this Book ended, the which *Paracelsus*, a most experienced man, hath left behind him, written of Metallick things, and is most full of abstruse wisdom, although few believe it, to the Elucidation and explaining whereof, I have heretofore uttered my mind, nothing doubting, but that hereafter it will be in better esteem with All.

Indeed I could have written more openly, and explained his words more largely, and more exactly have discovered his occult sence, but time and want of leisure permits it not at present. But if I seem to any body to have written more obscurely, let him consult with my other Writings, for they illustrate one another.

Now follows the Praxis of the aforesaid Theory.

The afore-written Explanation of the Book (*of Vexations*) of *Paracelsus*, hath taught a most certain and undoubted Transmutation of Metals, and hath sufficiently advised by what means they are to be handled. But because this action requires a great experience in metallick affairs, I am willing to add some special waies of Proceeding, and that in perspicuous words; but 'tis impossible to write so plainly that none may erre; it would be too prolix, tedious, and unfit, and as if many Elements of the Physicks, and other subtile things, were read to a Child that is not capable of understanding them; the labour thus bestowed, would be wholly in vain: Nor do I undertake to instruct the Tyroes or Novices in *Alchymy*, but such as are skill'd in the metallick labour of fusion, washing, separation, and the like, of

a subtile Intellect and experienced Judgment.

I would verily have written more clearly, did I not fear that the Art would become a Trade; some will think that I have written too openly, and will be angry that such Secrets are made known to the World: Who can satisfie all People? But be it as it will, 'twill be alwaies good to have done a profitable Work for my Neighbour.

This is the ART.

When thou hast put in the Heaven of ♄, and hast made it to flow with its Life in the Earth, then add the Imperfect Metals in a due Weight, *viz.* ♄, ♃, ♂, ♀, and a little ☽; let them flow so long with the Heaven, until with it they disappear, and having lost their nature and metalline form, are reduced into earth. This metallick earth being yet joined to the heaven of ♄, and compassed wholly round therewith, raise up by the spirit of Heaven, and make it corporeal, and it will receive its former metalline form; but although it be bettered, yet let it be killed three, or four, or five times, and raised up, that the melioration may be greater, and produce in the separation more *Sol* and *Luna*. There needs no Tyle, (Muffel) Cupel, Test, (treibs-scherben) Cucurbit, *Aqua-fortis*, and such like Vessels and Instruments necessary in other Metalline Labours, but 'tis perfectly finished in one only Crucible, in one Furnace, with one only Fire, and in the space of a few hours, from the beginning to the end. And to speak more plainly in this Process, the Sphere of ♄ is the *Regulus* of ♁, the Life is a whitening Salt, having its operation and motion from the Fire; the Earth is the Crucible. And thus hast thou the whole Process of

the Work laid open, the which I have tried above an hundred times in a small quantity; but let the studious Artist, above all things, observe the Fire, of what original, nature, and virtue it is, and the other things will be the more easily understood; for the Wood, the Coals, and such-like burning things, are not the Fire properly, but only its habitation, in which the Fire being occultly dispersed in the Air, is made manifest, visible, and perceptible. Even as the Man is not the Life or Soul, but only the receptacle wherein the Life or Soul, being infused from above, doth lodge: Nor is the man any more a man, but a meer carcass when the soul expires. In like manner Gold ceaseth to be Gold when deprived of its soul, but is volatile, and a Mineral without colour. Whence 'tis evident, that the Goodness of metals consists not in their bodies, but in their souls: On this account ☽ is added to the Imperfect Metals, that it may receive that invisible soul which lies largely diffused throughout their bodies, that it may collect it, make it visible, perceptible, and corporeal, whereby the mixtion of both (*viz.* of the *Luna* and the Soul of the Imperfect Metals) being made, it gets the name of ☉. Some body may ask, *Whether or no Gold will be produced, if no* ☽ *be added to the metalline mixture?* For answer, There will be ☉ produced, but less in quantity than if *Luna* were added, because the most tender (and as it were incorporeal) golden soul of the imperfect bodies is not able to quit it self and get out by its own proper force, from so many impurities as 'tis invironed with, without some other help, nor make a new body; 'tis needful and good to administer and lend to it a body wherein it may be contracted, and thereto betake it self, for which the *Luna* is most fit; the which being by a vivifying Fire radically united with the unclean metals, and well

subdued or exercised in the mutual ascension and descension, the purer particles of the Imperfect bodies do come together in this Circulation of the *Luna*, adhere thereto, are mixed, and become corporeal, the impure corruptible body being left, and a separation made of the good from the bad.

So then, I have now taught perspicuously the Art of extracting *Sol* and *Luna* out of all the Imperfect Metals, either apart, or conjoined with or without the addition of the *Luna*. If therefore thou attainest to the Art, I am glad; if not, thou hast no cause to complain of me, for I have candidly imparted unto thee the meer and naked Truth.

Another Separation of Sol *and* Luna *out of the Imperfect Metals, by* ♄.

First of all, melt ♄ well in a melting Vessel, (Scherben) add ♃, ♂, and ♀, mixt in due weight, melt them together, and forthwith the ♃ and ♂ will corrupt the Lead, being reduced into *Scoria* like to yellow Earth, and being reduced, they will in part restore their own Lead and Copper, but the ♃ and ♂ remain like black *Scoria*, which are to be kept: Let the Coppery Lead flow well again, and again add ♃ and ♂, and there will be again made *Scoria*, which are presently to be reduced. Let this Labour of Scorification and Reduction be repeated, until there remain scarce one or two pound of Lead out of an hundred to be washed, and you shall find ☉ and ☽ in part, which the Metals give out from themselves in this operation: But the *Scoria* which can't be reduced, let lie well heated red hot, in a peculiar Furnace, for some daies, and be fixed, and they will give in the reduction a golden and silvery ♄ or Lead to be

washed, that so the remaining ☉ and ☽ which the *Scoria* drank up, being extracted, may be of use unto us. This labour (which I never tried in great quantity, will doubtlessly (in my opinion) succeed in quantities; any one may try the thing, and exactly compute how much profit may be thence had every year.

Also the most Imperfect Metals may (by the benefit of Salts not corrosive) be truly and infallibly fixt and wash'd by a particular way, that they may give much ☉ and ☽, concerning which none need to doubt; the which I having oftentimes mentioned in my Writings, will not repeat it again.

Metals also being first reduced into a Calx, may be purged and wash'd by the glass of Lead, made by the addition of Flints, so as to yield much *Sol*, concerning which I have written heretofore: But there's required much ♄, whereby the metals may be largely diffused, otherwise it will not let fall the fæces; nor can its more pure parts be gathered together into a body, and concentrated; I take in the Flints, that they may receive into themselves the fæces of the unclean Metals, and so make a separation of the pure from the impure. And like as we are wont to mix the whites of Eggs to Honey, Sugar, and other Vegetable Juices, in the purification of them by Water, that thereby the viscousness of the Juices may be attracted, and so be clarified. In like manner, the Flints do in this operation occupy the place of the whites of Eggs, and ♄ of the Water wherein ♂, ♀, or ♃ is to be dissolved; the Labour is most pleasant and speedy, exceeding gainful, if the Crucibles (perforated by the Litharge) would but hold the mixture, and not let it pass through so soon.

But whosoever shall be so happy as to find Vessels

which can keep in the Glass of Lead for ten or twelve hours, he need not be solicitous or careful of other Arts to inrich himself by. For my own part, I could never be so happy hitherto, albeit I have carefully sought it for so many years. One only pound of Iron, ♀, or ♄, doth sometimes yield half, yea a whole lot of *Sol*, if the Work be rightly managed. And if you add a fix'd Salt, as of Tartar or bare Pot-ashes, it will then yield more, but the Crucibles will be the sooner perforated to our grief. I do believe that one or other will be a curious Searcher after this, and may in due time find how to make this Work succeed very well, both in Crucibles and in great Fires, or melting places; and will be thankful to GOD the Giver, and to me the Writer hereof. Heretofore I did set by this Labour very highly; and although I would not then communicate it to any body for a great price, yet now (being not permitted to make any further Progress therein) I freely bestow it, that others also may try their fortune.

Also imperfect metals are purged from their combustible and noxious sulphur, by the suddain fire of Nitre, of which we have formerly spoken about Mercury, the which is to be lookt on as the most speedy, and as it were a momentary Melioration of metals N. B. especially if they are reduced into a soluble salt without a Corrosive, for which thing ♂ and ♀ are most fit, exhibiting a Philosophical Vitriol, the which may be most commodiously purifyed to perfection. There's a great secret lies here under, and haply greater than a particular work may require; let the Poetical fable of *Venus* and her son *Cupid* be considered of; what is there meant by *Cupid*, whether or no it be not ☉. Verily I could discover more good ways of producing ☉ and ☽ out of the more vile metals, but because there's enough already spoken in

the explication of the seven Canons or Rules, it seems good to me to forbear. He that doth not understand that nor can apprehend its drift or scope, will not be profited by the addition of more things. If the fundamentals are laid open, any one will conveniently administer his intent and labours: But yet I will add over and above, a most pleasant work, Parabolically, being the foundation and Basis of the whole Alchymical Art, under which is comprehended the radical solution of metals, *Conjunction*, *Destillation*, *Sublimation*, *Ascention*, *Descension*, *Cohobation*, *Cementation*, *Calcination*, *Inceration*, and *Fixation*, and so I will end the work of *Transmutation*.

There was a man (♄) who had two sons, (*Bismuth* or *Tinglass*, and ♃) the younger (♃) said to his Father (♄), give me my portion, (Note well, *Bismuth* and ♃ were always accounted Lead, as well by the Philosophers, as by the ancient workers on metals, the one *viz. Bismuth*, they called an ashy colour'd Lead, the other (♃) a white Lead, and this a black Lead,) and behaved himself stubbornly and unmannerly, that is, ascending or getting up; his Father gives it him, and he goes a wandring therewith, (Note well, when ♃ and *Bismuth* together with ♄ do feel the fire, the ♃ is separated from the ♄ and *Bismuth*, and ascending, takes some-what from ♄ with it, and becomes a Contumacious *Scoria*, and this is to go a wandring) and he enters into an Inn, *where* ♂ *the Host, and* ♀ *the Hostess*, had the sign of the World (♁) in a hanging Table, who having entertained him, dispoiled him of all his Fathers goods, (Solution) Then there grew such a great scarcity of Corn (with drought) that all men were even deformed by reason of the Famine (corruption), to prevent which he is enforced to keep hogs, (that is to dwell with fætid Nitre) and to feed on huskes,

(that is *Tartar*) (inceration, imbibition) by which being humbled (Digestion, Circulation, Edulcoration, Putrefaction) he returns to his Father, (Incorporation) as a lost Son, (some thing is made nothing, and nothing is made something again) he brings forth a new Garment, (*Argenteous*) he puts a Gold Ring on his finger, (☽ impregnated with ☉) after which he remains constant with his Father, and becomes a good and thrifty Householder, that is, a fixt metal. And now that I thus compare this Transmutation of imperfect bodies, especially of ♃ to the parable of the lost Son let no body be therewith displeased, for I did it for the easier knowledge thereof. There lies under it a great secret, I never observed the like-changes in my whole Labours; for first of all, in the Solution appears a blackness, which haveing remained his time, there follows the tail of the Peacock, greenness and then whiteness; but whether or no a redness would follow, if it be detained longer in digestion, I am not certain, for I never arrived beyond the whiteness. It is a most pleasant Labour, greatly exhilerating the Artificers mind, of small charges and little difficulty; if they, find the weight and good vessels, it shews the way and opens the Door to higher Secrets, happy is he who attains the things, he'll never be satisfyed with the sight thereof, nor admiration, how rich, generous, fair and glorious Nature is in her retirements. Note well, that every Metal may be washt apart with ♄ and Salts, so that being exalted, it may yield ☉ and ☽ in separation, and pass through all colours, but it will not be so profitable, as if they were all joined together, for then one operates spiritually upon the other, changeth and perfects him. And now having abundantly discovered, how ☉ and ☽ is to be extracted out of the imperfect metals,

and because in that labour ☉ and ☽ is most an end jointly together, 'tis very necessary to know, by what Art they may be separated each from the other, that so each may be had by it self, which is to be done thus; If this mixture hath more ☉ than ☽, 'tis most profitably to be melted by Antimony and precipitated into a Regulus with Iron washed with Nitre and purifyed. This work you may find described in my former Books. N. B. If the Nitre in the separation of purification of the Reguli, prey upon some of the ☉ and ☽ and attract it to it self, let none grieve thereat and account his labour lost, but let him remember the saying of *Paracelsus*, Destruction or Corruption makes the good perfect; The Nitrous Scoria, in which the cleansed Reguli are, let be carefully kept and fixt, then by a strong flux let them be reduc'd and you shall receive the lost Son, much more elegant than he was before it's being lost, so that hereby you lose not, but rather become a gainer. Here would be a fit place to speak of a certain profitable work if the drift of the thing would permit. Enough is spoken to a wise man, Fools will not profit by any thing: But if it contain more ☽ than ☉, let the mixture be at first of all granulated, and burnt with Sulphur, let it be precipitated, either with ♁ alone or without it, with lead and Salts; thus separating the ☉ from the ☽ into Reguli; then wash it with Nitre or with Lead, and let it be purifyed, the work being to be done in like manner. You are to note that if the precipitation be done with ♄, then the *Caput mortuum* (Halb Kopff) is to be added, whereby the work will be apparently hastned and bettered. N. B. If the Reguli of the maturated or fixt Metals be coppery or pale, they need not be washt, but 'twill suffice if being granulated, they are precipitated with Salts, and the *Caput Mortuum* (Halb Kopff,) all the ☉ and ☽ will

come forth in peculiar Reguli, the Copper and the Lead will be scorifyed, and may in acute Furnaces (Stich ofen) be reduced, and be aplyed to other uses according to the rule of Art. I judge it inexpedient to heap up more things concerning Extraction (Seigeren) washing, and the separation of metals, being every where mentioned in my other writings. Also it will be needless to explain, by what manner metals may be more commodiously melted so as to yield more and better metals, as also how the poor and rough Minerals that abound with a preying and devouring Sulphur, whereby the metal in its fusion, is turned into *Scoria*, and affords so little profit, that being not able to quit cost, they remain unmanaged, the which Sulphur especially in the Minerals of Copper and Lead, may by a singular Cement or Gradatory fire, be inverted and changed, so that afterwards in their fusion, It's so far from swallowing up the metal, and turning of it into *Scoria*, that it rather exalts it so as to give ☉ in the separation, the which could never have been done without this burning or roasting. No body doth throughly search after any help for this or that metal, either before the melting or in the melting of it, if the gross fire is not able to melt it down, but most frequently the best part remains in the *Scoria* without profit or use. 'Tis possible for an experienced Chymist, profitably to extract that ☉ and ☽ which the *Scoria* have swallowed up, what by fusion and by adhibiting suitable *Menstruums*. A work of this nature hath been hinted in my discourse of the Extraction of Flints, and more shall be likewise mentioned when I come to write of the felicity and hidden Treasures of *Germany*, which time let the Reader with patience expect. A nother benefit would arise to such as work on metals, if they had the perfect way of separating ☽

and separating the ☉ by precipitation, that lies therein, (Neider Schlagh) that it may not be so unworthily wasted with the ☽ by the Artificers.

And thus I conclude this Appendix or addition to the Mineral work, the which I have brought forth to light with a good will for my Neighbours sake, that so, being accepted with a serene mind, the Glory of God may be thereby advanced; for which end I wish with all my heart a divine benediction on the Labours of every honest and active searcher into the metalline affairs. *Amen.*

The APOLOGY of

John Rudolph Glauber,

Against the Lying Calumnies of

CHRISTOPHER FARNNER.

'Tis an ancient Proverb, *He that toucheth Dung is defiled, and will alwaies savour of a Dunghill.*

Experience makes it evident.

I ever hated Quarreling, as more agreeable to the Pevishness of Women, than the more Generous Temper of Christian Men; and have, as much as I might, alwaies declin'd it, being rather desirous to suffer injuries, to bear losses, by silence to forgo those things I might lawfully lay claim to, to undergo any thing, so that I might enjoy my beloved Peace (with which GOD has blest me hitherto). Neither have I ever, so long as I have liv'd in the World, (and I am pretty ancient) been taken, by the worst of men, for a contentious Person: But perfidious *Farnner*, unprovoked, urges me to this vindication of my self, by going about not only to hurt my Person, but also by a Pride no less than his Envy, to explode and defame all my Writings, and by infamous Letters dispersed abroad, to render me odious to all good men. Which wicked Enterprize, though I heard of it by many, I durst not believe, till a printed Epistle of his came to my hands, which having perused, I thought I could not enough admire his detestable Impiety, and the many scandalous names he had for me.

Art thou not ashamed *Farnner*, to expose my Works to the contempt of others, when thou neither dost, or ever canst understand 'em, and before now hast prais'd 'em, as may be proved from your own hand? I'm sure I never merited that you should cavil at me where-e'er you come, and proclaim my Writings unprofitable. You ought rather all your Life, in consideration of the many benefits you have receiv'd at my hands, to have behaved your self as a Man grateful to me; but instead of that, notwithstanding the Obligation that lies upon you to the contrary, you have despightfully recompensed all my kindness

with the basest Ingratitude, which is directly opposite to goodness.

To what end do you deny that you had your greatest knowledge from me, and in the mean time expose it as your own, and upbraid me from whom you had it?

I never before believ'd you unfaithful, but alwaies thought you candid, and have communicated so great things to no man as to your self. I believe you will not deny your coming twice from *Lochgovia* to me at *Kitzinga*, and entreating me to communicate some Secret to you, whereby you might get a livelihood. Have you not been forced twice, being repulsed, to return home with this Excuse, That I wanted time to instruct you? And when you came the third time, I suffered my self to be perswaded, and did communicate some Secrets to you *gratis*, on this consideration, That you should impart those things wherewith I trusted you, to no man without my leave; which you promised by an Obligation, (*viz.* That you wou'd keep all things secret) under the penalty of Disgrace, and the forfeiture of all your Goods. Why hast thou falsified thy Word, and contrary to thy Promises, so wickedly ridicul'd me among all men, when with thy whole Family thou didst promise to be faithful to me? Not only Obligations, but also thine own Letters are Witnesses: Neither do I question, that if I had lost or wanted them to convince thee, thou wouldst have denied, and that with an Oath, that thou wast ever beholden to me for any thing, as thou hast already begun, and as thou in thy spightful Writings despisest all my Secrets, and proclaimest thine (which yet are mine) with praise. You doubt whether or no the reading this will make me repent that I ever trusted you with

so many things, which I had never done, had not you obliged your self to labour diligently with me in my Laboratory, to produce those things for the profit of us both. But what can I do with them? They are perished and gone which yet might sufficiently have sustain'd both you and me, had not you made 'em publick.

I pray, What gain can you hope for from them, now they are every where known? Wherefore when I see those things taken from me, and by you imparted to all men, in spight of me, for your own advantage, I think fit (for I cannot hope for any farther profit from them privately) to make 'em known to the World; and by the Grace of GOD, I may live without them: But if I also should buy all thy goods which thou unjustly possessest and sellest to every man, of thee, and distribute them about the world, thou wilt see thou canst not easily recover them, or others in their room. I indeed will give you nothing for the future, neither can my unfaithful Servant, whom you have made as good as your self, give you any thing, for whatever he hath learn'd of me these two years, he has given you, which you also have laid up among your own wares and exposed to sale. Who will hereafter trust you, you have so wickedly deceiv'd me? Every man will abominate you, and shun your Partnership and Company, neither undeservedly, for the Laws of your own Obligation make this your Fate: So the merit of the Crime shall return upon the Author, and you can be more sure of nothing, than that Divine Vengeance will pursue you. I confess indeed some others, as well as you, have injur'd me, but none by so wicked an act; whom nevertheless GOD (to whom I refer'd my Cause) hath so severely punished, that each of them, by one cause or other, has brought upon himself his

deserved Reward of Punishment. But I had yet farther tolerated you to exercise your Trade at your pleasure; neither had I followed you to *Lochgovia*, to urge your Obligation to you, but had committed Vengeance to GOD; only for that you were not content to sell those things publickly for your filthy lucre, which you had of me, and which you obliged your self to keep secret, and to take that profit to your self which was due to me, but also you have rendered me, and the things you had from me, odious; which has been so much to my disadvantage, that I can no longer bear, but am now resolved to the utmost to refute those impious and lying Calumnies, which you by your Letters have sent into the world concerning me, and to defend my self and my Works, against which you have so wickedly inveighed, that all the world may see how great your perfidiousness has been towards me, and that your Heart acted by Hellish wickedness, has raged against me with horrid Lyes, Taunts and Reproaches, contrary to all manner of Equity: You must needs know, that nothing can be more troublesome to me, than to spend that time in reproving your Lyes, which I could otherways employ to greater profit; wherefore I shall answer your trifling stories as briefly as is possible. Every wise man will easily see how frivolous your Excuse is. Do you think that any honest man will believe you, if you say you don't owe the greatest of your Knowledge to me? No surely, for no man is ignorant of it: About two years since, you did not know how to bring a Crucible to the Fire, much less to make a trial of Brass; which you did not learn of me, but my unfaithful Servant taught it you, whom you for that cause esteem; yet seeing you know so much, how lawfully may I complain of him, what a Rascal he has been to me, and that you for that very reason

have taken him to your self, that you may fish from him whatever he had learned in those two years he served me; although he did not shun you, because he was unwilling to communicate those things he had learn'd of me to any man else.

And so you make your self Master of my Secrets, and Covenant with him to undo me and mine: Is this the part of a good man? You do not only expose those things you had of me, but those also which my perfidious Servant has since given you, to be sold at a price, when you have no right to sell another mans goods, to which you have no title. We'll come to the point and expose all your wickedness, as well your impious speeches, as perfidious actions, to the view of the world: But first of all, I will lay before you the obligations you gave me, as most sure pledges of your truth, that by the review of them, you may judge your self how honest you have been, and how faithfully you have kept your promises; and every man shall thence see, (especially those among whom you have so wickedly ridicul'd me) with what base ingratitude you have recompensed all my Favours.

The first Obligation which FARNNER *gave me, runs thus;*

Forasmuch as the most excellent and learned Mr. John Rudolph Glauber*, moved by a singular affection towards me, has communicated, shewen and demonstrated to me undernamed, some of those secrets whereof he is Master, and hath enjoined me to silence; I therefore bind my self, and promise upon my Credit and Reputation, and call God and my christian profession to witness, that I will divulge none of those things to any man living: but if it be so (which God forbid) that I do at*

any time communicate any of those things to any man, then I shall most willingly renounce all my right in those Goods, movables or immovables, which I shall possess, and give him absolute power to take them to himself, and convert them to his own use and advantage: and not that only, but I give him farther power to proclaim me perfidious and wicked, to defame me and make me abominable to all men, for which reason, the laws of Silence shall be observed by me most strictly. Nay farther, in consideration of the many benefits he has bestowed on me, I give up my self, my beloved wife, and my children to serve him in all things lawful and honest, to go when and where he pleases, and to ease his labours; and if he dye first, (which God avert) to be alike serviceable to his whole Family, which care he also has promis'd to me and mine: I promise then, (if my Fates grant me life) that I will be to my utmost, serviceable to him so long as he lives: In witness whereof, I have hereto set my hand and seal. Given at Kitzinga*, the* 15th *day of* June, 1652.

Testis, Spirensis Canonicatus Quæstor, *Lochgoviæ* & *Horrhemi*.

Christopherus Farnnerus.

The second *Obligation*.

I Christopher Farnner, *for the time being Canonicate Quæstor of* Spire, Lochgovia and Horrheme*, in the Dukedom of* Wirtemberg*, to all by whom these presents shall be read, make known, that the most excellent and learned Mr.* John Rudolph Glauber *for little or no reward, has communicated some of his secrets to me, and with me made a covenant after this manner, That I must oblige my self for what he hath already done, or hereafter shall do for me, to be all my life thankful, not*

only to him, but to his Children also. But for as much as 'tis most certain, this life will have an end, but we know not the time when, the first Obligation is not full and clear enough, and for that cause I bind my self and promise, (so help me God) and swear by the King of Heaven who always bears witness to the Truth; and farther, upon my Credit and Reputation, for the preservation whereof every Christian man should be induc'd to keep his promise, if (which that God would in mercy avert, I shall not cease to put up my daily Prayers) the above named Mr. Glauber *and his beloved wife shall die, and leave their Children unmarried, I do oblige my self by this most solemn Oath, to observe faithfully, and as a Christian man ought, these following things:* viz. *I will forthwith take his Children to an inheritance with mine, and to my utmost skill, instruct them in the secrets of their dead Father, and shew them all things requisite and necessary, as fully as to my own Children; and that after this manner, That what ever of their Parents heritage belongs to them, they shall wholly possess, and they shall lawfully demand it as their proper due; and if any thing goes from him, I will redeem it, so that my Children shall lay no claim to it: on the contrary, (for those secrets communicated to me, which hereafter may redound to my profit) I make the aforesaid Mr.* Glauber's *Children Heirs with mine, that they may be admitted equally to my Estate, and alike enjoy the Goods of me living: But if I* Farnner*, contrary to my expectation, shall depart this World before Mr.* Glauber*, he is bound to instruct my Children in his Art, according as they are qualifyed, only so far, as that thereby they may get their living, and that they may not be burdensome to him. He may at his pleasure instruct him that he shall esteem most fit in some secret, with which he shall afterwards teach his Brethren to get themselves maintenance. And for the same cause, I call*

my little Son Alexander*, and surrender him to Mr.* Glauber *and his service, so that he may keep him as long as he shall be willing, and it shall not be in my power to take him from him according to the agreement we have both made with him: all which things are restrain'd to this on either side, That if the Parents of either part die before their Children are provided for, which God forbid, and our Children shall be free by the early death of their Parents, then each shall to his utmost, provide for his own Children.*

That all these things may be observed the more firmly, I affix my Seal and name, and by my own hand writing, oblige my self so, that if at any time I falsify my word, my Children may be call'd to witness my perjury. Given at Kitzinga *the* 10th *of* September*, in the year* 1652.

Christopher Farnner.

NB. I did not require this obligation of *Farnner*, neither wou'd I have taken it, but admonish'd him to be true to the first, with which I was content; for he gave me this for no other reason, but to get more out of me: But, because I had found out his cheats, and he wou'd not be advis'd for his own profit, he at last makes mention of this new obligation, in a certain epistle of his, thinking thereby I was oblig'd to a farther communication of my Art to him, tho I have often told him, that I valu'd not this last obligation but wou'd give it him again: But when he refus'd to take it, I cancell'd it, and kept it by me, for this reason, that it might be seen how he had bound himself by this new Obligation, which certainly he wou'd never have done, without very good cause.

Expressions gathered out of certain of Farnner*'s Epistles sent to me; from which is evident how*

greatly he is beholden to me.

Therefore I faithfully assure you, that I will shortly leave my House, and take a Journey farther off, to provide for my Family; my Wife too is very willing to go with me, and to be interested in our agreements, but I can't see what shou'd oblige her to it, when it can't be effected very commodiously: Yet I resolve, if nothing extraordinary hinder me, after eight daies, that is, on the $^{14}/_{4}$th. *day of* April*, to depart hence, and then answer your most friendly Letters, together with my beloved Wife, and all my Family, to take part with you in all your Labours, and help you with the greatest diligence. But because I intend to be so suddenly with you, I shall write no more at this time.*

March 26th. 1653.

Out of another Epistle, *July* 17th. 1653.

I hope you will excuse me, that I did not come to you, because hindered by my Wife's faultiness, who telling me she wou'd come with me, privily laid Obstacles in my way; this offence wou'd not destroy a Knave: Wherefore I again intreat you not to cast me off, but continue your wonted favour to me; and I shall endeavour in my place to give you ample satisfaction; neither shall any thing hinder my speedy performance of what I have promised.

Out of another Epistle, *July* 29th. 1653.

Forasmuch therefore as I have by the wicked deceit of my Wife, broken the many Promises I made of coming to you, unless I wou'd have taken her wicked Amasius *or galant, as Companion in the Journey; it has at length pleased God to take her away, and so put me in a capacity,* Worthy Sir*, of serving you without the least impediment, wherefore I give my self wholly to your Commands: And altho' I have been perswaded by*

Persons of principal Authority to marry again, I will not, but commit my self to be manag'd by your Counsel, as you were my Father. Therefore, since we are parted, if my Fates grant me Life and Prosperity, I will come to you, and commit my self to your guidance and protection, Worthy Patron; for which reason I shall forbear to write any thing at this time of your Laboratory, more than what I see in your Letters, that all things may proceed the more regularly. Wherefore, though I have been solicited by many, yet shall reject all as much as I may commodiously, in hopes of this, that when I have first gotten your consent, I may communicate my labour to some, whereby I may get a good Sum of Money: But these things shall be deferred till our happy meeting.

In another Epistle he saith;

That he was confident he could find out all my Art by my Writings, except that the Vessels do not alwaies abide the Fire, and that the Apothecaries refused to buy his Medicines, unless he would teach them the way to prepare 'em: Again, he would give me Fifty R. Dollers for each month, for my part, as may be shewn from himself; these are his words: And if he was not oblig'd to me, why would he give me Fifty R. Dollers each Month?

From all which (and much more I might add, which for brevities sake I omit) it evidently appears, that *Farnner* was obliged to me, which he would never have been, had not he receiv'd some benefit from me, which render'd him bound to me: But if he is oblig'd to me, why was he so wicked, as in his lying Epistles so malapertly to despise, and disparage me and my Secrets, which he had from me? Hence then every man may perceive what they ought to judge of him, that he has both behav'd himself most

perfidiously wicked toward me, and also, that he has sufficiently declar'd himself the most ungrateful in the World.

But that no man may suspect that I wrest any word of *Farnner*'s, in his obligations given to me, to his disadvantage, or my own ends, I have taken care to have his own hand-writing view'd by Notaries and Witnesses, who will attest, that what I have printed is word for word the same with what I have in writing under his own hand.

A Specification of those Chymical Secrets *which* Farnner *learn'd of* Glauber*, and in the trial found true, and of those which yet are found and brought to trial; where it must be known, that those, of which there is no mention made here, if* Glauber *should relate them, they would not answer his expectation in Practice, according to his information: Also the Charge which he must be at who will make trial of those Secrets after a right manner, is here added.*

1. *Glauber*'s Panacea, for 30 R. Dollers.

About which these things are to be considered: It is made chiefly of Antimony*; to which, according to his common way, Sulphur is added; which done, another Separation is made, in which, from a whole pound of Sulphur and Antimony, no man shall receive more than three ounces of the purest Sulphur. There are indeed two other Subjects, which produce a golden Sulphur better than Antimony; but I have found a way to extract a thick and pure Sulphur from all sorts of Metals (except* Luna *and* Sol*) and Minerals, and after* Glauber*'s manner to make Tinctures. All these Secrets annexed will be taught for the price named.*

2. *To reduce Minerals and Metals into Dross, after*

Glauber*'s way, to reduce them to nothing, and then without Charge to bring them to their own Species again, or to turn them into fluid Oil, or Powder, or Tinctures; which things bear an affinity to those above: For Twenty R. Dollers.*

3. Glauber*'s* Alkahest*, and a way to prepare it, perhaps unknown to* Glauber*, and built upon a more firm foundation; Fifty R. Dollers.*

4. *The Trial of all sorts of Brass, but not of every sort at once, for every one must have a particular Practice.*

5. *To make store of Flowers of Coral for a little Cost; ten R. Dollers.*

6. *To make melted Tin hard, that it shall shine and sound like* [*Silver*]; *Ten R. Dollers.*

7. *To make white Vitrifications upon Vessels; for Ten R. Dollers.*

8. *Plenty of Spirit of Salt.*

This is not prepar'd after Glauber*'s way, and though* Glauber *was so great a Lyer as to affirm, that in a clear Fire fifty pound of this Spirit might be prepared in one day, yet he cannot produce above one or two pound: Wherefore my invention is much better, and my Spirit is pure, but* Glauber*'s has* Vitriol *mix'd in it.*

And though I gave Glauber *a great Sum of Money to communicate these Secrets to me, yet I have not found any of them true, according to his Information, but was fain, with great industry to seek other waies of working those abovenamed.*

And for those that follow, though they may seem to be derived to me from Glauber*, yet they have not succeeded by his Information, but I was forced to go another way to work, which will hardly be found by*

Glauber.

9. *To prepare good store of the* Spirits of Vitriol, Nitre, Salt, Aqua fortis, Aqua Regis, *also* Sulphur, *after a manner not yet known, and which will scarce be known to* Glauber*; forty R. Dollers.*

10. *To produce plenty of volatile Mineral Spirits, which Spirits ascend the Still before the Phlegm; but the abovenamed after the Phlegm.*

NB. *These Spirits have the same taste that Spirit of Wine hath, and evaporate like it, and are void of corroding: neither do I doubt, but I can produce such Spirits from Metals also, though in metallicks I have made no trial yet.*

11. *Flowers of Minerals and Metals, almost without diminution, compendiously under a refrigeratory cover, which* Glauber *never saw; Ten R. Dollers.*

12. *The Quintessence of all Vegetables: Although* Glauber*, in his Tract, promised to bring that also to light, yet he never performed it from all Vegetables, but only from hot, which give Oil, which is of no moment; but that from cold, to wit, Herbs, is artificial. Thirty R. Dollers.*

13. *To give new strength to dead and eager Wines, and make them as good as ever, or better; Two Hundred R. Dollers.*

NB. Note here, *That I very much run against* Glauber*'s Tract of* Vinary Secrets*; and if my own Industry had not taught me more than that, I might indeed, according to his instruction, encrease the strength of Wine, but with an ingrateful relish, so as I could never hope to try eager Wines according to Art. But now I cannot only bring to maturity all sorts of Liquors from both sweet and sowre Grapes, and other*

sorts of Fruits; and give them new strength in the Hogshead, but also render them pallatable to all men. Whoever hath tasted Glauber*'s Wines, and shall afterwards taste mine, will easily discern a difference.*

14. *To give any Wines what relish I please.*

15. *To prepare a burning Spirit of all sorts of Bread-Corn in abundance, with great ease and profit, very much like that which is made of the Dreggs of Wine, and sustaining all Trials: There are already eight pounds of it in trial, whether they will bear a Voyage by Sea, or not; they are sent beyond Sea, which if they will undergo; Two hundred R. Dollers.*

NB. *Further, I knew how to reduce all burning Spirits into one form; as, the Spirit of* Juniper*, or Bread-Corn, like to Brandy, or to make spirit of Wine like spirit of Bread-Corn or* Juniper*, so that it shall not be discerned of what subject 'tis made.*

Neither do I doubt, but that I know also how it comes to pass, that some Liquors carry'd beyond Sea, are corrupted: Which therefore, if by the benefit of this trial, the Certainty is made known to me, a good reason, and after what manner it may be help'd, may be learn'd of me for a trifle.

16. *To encrease the strength of all sorts of Beer, that they shall have equal Virtue with* Rhenish-*Wine, and yet the Beer lose nothing of its relish, but be both more pleasant and durable; for when thus order'd, it will not so soon sowre; but if it be decay'd, which will happen to Wine in time, the Vinegar which will arise from it, will be as good as Wine Vinegar: fifty R. Dollers.*

17. *To give sowre Beer its natural sweetness, and in fourteen days to make it sell for fresh; and so, though turn'd three or four times, to make it sweet in fourteen daies time without fail.*

18. *To produce Vinegar of Bread-Corn, and such other things, very like Wine-Vinegar in all things without fail; fifty R. Dollers.*

19. *To prepare Vinegar of green woods, an Hundred measures daily, together with Oil of Wood, without Charge; but if any man will have this like other Vinegar, it requires rectifying, which will ask some time and cost: Ten R. Dollers.*

20. *Although* Glauber *delivered in a little Tract, a way to make Tartar of the burnt Lees of Wine, yet I have alwaies committed many Errours, by following his very Oral instructions, till bethinking my self, I at last made it with fruit, and plainly reduced it to Crystals.*

NB. *Whoever will follow the Directions of that Tract, may.*

21. *To separate every Oar of Copper with profit, and from thence to produce Gain.*

22. *Of that sort of Copper Oar, if by chance they have any ☽ from thence, to separate it with fruit, without loss of the Copper and Lead.*

23. *To separate Lead from Tests and Cupels, for small Cost, and as little Labour.*

24. *To separate Gold and Silver by melting.*

25. *To build a Furnace, in which one may both torrifie, melt, and try Metals in the Probations of* Cineritium*; containing the small Trials of an hundred Crucibles, or more, only heat with Wood.*

26. *Further, a Furnace, in which, without Bellows, one may try a good quantity by the Probations of* Cineritium.

And Lastly, *Forasmuch as the lesser Trials have deceived me, if I went to work on a greater quantity, I*

will teach wherein my chief skill consists.

1. *In the lesser trial I have found, that with the Spirit of Wine, as 'tis generally prepar'd, I can make an Anatomy of all Vegetable, Animal, Mineral, and Metallick Subjects, separate their three Principles, make the volatile fix'd, and the fix'd volatile, and force 'em through a Limbeck.*

2. *To force the Anima and Salt of Gold through the Limbeck, and to reduce it, well mix'd with its Spirit and volatile Salt, into a potable body like Vegetable Essences.*

But because Gold may be reduced into such a sort of Essence, it will not be very hard to render the imperfect Metals and Minerals, with their Three Principles, potable: and these Principles are inseparable in their volatility; wherefore I doubt not but they may be fix'd.

3. *Furthermore, I have found by small trials the way of taking all Corrosion from all Corrosive Spirits, by this general Spirit, and of reducing them (by the help of Divine Providence) into sweet Oils or* Menstruums*; which if it answer the desire in large quantities, (and I don't doubt it)* Glauber *with his* Alkahest*, which indeed is not wholly to be despis'd, must be forc'd to hide: for I have hopes, that by the assistance of Divine Providence, whatsoever subject I shall propose to my self, I can separate and purge its three Principles; lastly, join them, and so produce a better subject and more pure: But 'tis true, seeing I was so often deceived in the lesser trial, I did not interpret it as Truth, but Speculation. However, I can effect very well whatever I have here said, as well in the great as lesser.*

4. *But forasmuch as so many excellent, as well as new, Secrets, offer themselves, that I can't chuse but clearly know them, and therefore 'tis impossible that I should make all those Secrets abovenamed profitable to*

my self: And although I am now about many things, that hereafter a great quantity of them may be expos'd by me to be sold in pounds and hundreds; yet I shall not be so envious to refuse a Communication of them to any man for the named Reward; nor keep from him any knowledge I can give him.

Yet he must know, that it is very troublesome to instruct any man that is altogether ignorant and void of skill in Chymistry; Therefore whoever will learn any of these things of me, let him either come to me, or signifie his wind by his Letters, thus: To Christopher Farnner*, Canonicate Quœstor of* Spire*, &c.*

These are the words of the perfidious *Farnner*, which he hath used in his most false and wicked Writing.

A Specification of those Chymical things.

This, good Reader, is the Beginning or Preface of that Lying Writing, in which he hath exposed to Sale those Secrets he had of me, and found good: Besides, he adds, That those Secrets which he had of me, which do not succeed according to his desire, are not added; but those only whose Truth he has found in the trial.

Now we'll open this *Pedler's-Stall*, and look through all its parts, to see what is in it.

These words follow:

1. Glauber's *Panacea*;

About which these things come to be considered.

Here *Farnner* saies my *Panacea*, for the greatest part, is prepared of *Antimony*; besides, there are yet two other subjects, from which a purer Sulphur may be extracted, than that which is drawn from Antimony: Which vain fancies he may vend, or what else he will, I can't hinder him, seeing I have taught him to extract nothing but a pure Medicinal Sulphur from Antimony, by the benefit of a singular Liquor, which I call *Alkahest*. He adds also, That he can extract the same Sulphur from all sorts of Metals and Minerals (except ☉ and ☽) and after *Glauber*'s way convert them into Tinctures.

I declare against this his first Position: *Farnner* here saith, That *Panacea* may be prepared from Antimony for the most part, and promises to communicate it to any man that desires it, for a certain price, to wit, thirty R. Dollers. But thou hast seen, gentle Reader, how strongly he bound himself, by his Obligation given to me, to keep secret those things I had taught him, and communicate them to no man, under the Penalty of Disgrace, and the forfeiture of all his Goods. I confess indeed, being cajol'd by his frequent solicitations, I taught him the way of preparing the *Panacea*, but from no subject but Antimony. This *Panacea* of Antimony *Farnner* exposes to sale, for thirty R. Dollers; and moreover has taught that Preparation to many, from whence great profit hath redounded to him; when yet this was not lawful for him to do: But he shall be forced e're long to give his Reasons for so doing, and I will one day see if I can have a remedy for this evil. I will now only shew how wicked he has been to me: Wherefore I am compelled to expose those secrets he had of me and every where makes common, to the view of the whole World, that no man shall need to give Money to *Farnner* for 'em, or any other reward, but may

come to the knowledge of them for nothing: for if that knowledge is divulg'd by *Farnner*, who unjustly, by the publication of it, endeavours to heap up to himself Fame and Riches, I may well communicate them to all men faithfully, that every man may save his money: But because this *Panacea* is prepared by the benefit of a hot and Saline Liquor, which I call *Alkahest*, therefore 'tis necessary that he who desires this *Panacea* should first know the Preparation of the Liquor it self, without which he can effect nothing. Indeed it grieves me, and I am very hardly brought to discover and divulge to the World so excellent a *Menstruum*, by which so many rare Medicaments may be prepared; and I had never done it, had not this perfidious *Farnner* chang'd and adulterated it and its use in the Preparation of the abovenamed *Panacea* of Antimony and others, from Minerals, Animals, and Vegetables, and by prostituting and communicating it to all men. I think him, indeed, a Boar out of the Forest, broke into my Garden of Flowers, that has with his snout routed up all the many Fruits, which with much sweat and labour I have planted; but the deed will once be rewarded.

Now follows a very short Description of the Preparation and use of that Liquor, needfully requisite in Vegetable, Animal, and Mineral Medicaments: And though I might teach another and far better way of preparing it, yet there's no necessity for throwing all my Pearls before Swine: It is sufficient, to my sorrow, that I cannot recal those which this unfaithful *Farnner* has sent abroad, and am forc'd to behold their destruction with the greatest trouble.

Of the Preparation and Use of a certain secret Universal Menstruum*, with which one may*

institute an Anatomy of all Vegetables, Animals, and Metals; correct them, and from thence prepare good Medicaments.

Of this *Menstruum* the Modern Philosopher *Helmont* makes mention in some places of his Writings, and attributes wonderful Effects to it, which he exhibits in the Preparation of Medicaments, and gives it the name *Alkahest*; which name *Paracelsus* also remembers; but in few words, it is the same as if we should say *Alkali est*; for when the Letters *l* and *i* are joyn'd with a dash, it produces the word *Alkahest*. But what moved *Helmont* to call it *Alkahest*, we shall not here dispute: I indeed believe he did it, thereby to demonstrate its Nature and Essence; for in German *Alkahest* is as Al gar heis, or Al zu hees; but in the *Brabantick* Idiotism, which was the Mother Tongue of the Author, it sounds Althohees, that is, very hot, and so the name answers to the Essence; for this Liquor is nothing but a meer fiery Water, by whose immense and Secret heat Vegetables, Animals, and Minerals, if they are put into it a certain time, are forthwith purged, ripened, and made better, so that they become excellent and wholesome Medicaments, which without this fiery water cou'd not be done. This *Menstruum* then, is nothing but an igneous Liquor, prepared of urinous Salts, which is endowed with those Virtues which are attributed to it in my Treatise of Flints.

An Admonition.

Here it is to be noted, that this *Menstruum* may be prepar'd of more than one Subject; for Nature is Copious, and sets before our eyes many various Ingredients, from which, by the help of Art, divers things may be effected; as may be evidenc'd in this

admirable Liquor, which may be made not only of the common *Sal terræ*, or *Salt Peter*, but also of the fix'd Salt of all Vegetables, and especially of Tartar; 'tis no matter of what Subject it is prepared, for it has still the Same Virtues that are ascribed to it, forasmuch as, if a right Preparation be made, the common *Sal terræ* and the fix'd Salt of Vegetables are of one and the same Nature and Essence: For the genuine *Sal terræ*, or *Salt-Petre*, may be made of Salt of Tartar; and of *Sal terræ*, or Nitre, a fixed Salt, like Salt of Tartar; of Spirit of Wine, Salt of Tartar; and of Salt of Tartar spirit of Wine: of Wine-Vinegar, Nitre; and of Nitre, corrosive Vinegar. So those Salts partake of either nature, and will be manag'd at pleasure; neither are they undeservedly by the ancient Philosophers, called Hermaphroditick Salts. Wherefore it is not for any one to be offended at its base original, and accordingly undervalue it; 'tis no matter wherein the good consists, 'tis sufficient to say it is good, and may be converted to good uses: Good things ought to be so much the more esteem'd, by how much the more mean and base their original may have been, for Nature and true Art use both base and abject things in their Works, and nevertheless, their desires are accomplished: But on the contrary, the vain reason of Man in his labour aims at nothing but Sublimity and specious Notions, and therefore brings nothing to a good end, but destitute of a happy success, finishes his fruitless labours with great damage.

To conclude then, take this advice; Be not offended at this wonderful Liquor, because of its mean original, but let the Work praise the Work-man.

Now follows the Preparation.

If any man will prepare this Menstruum of Salt-Petre, he must extract and coagulate that Salt from the earth with common water, and adding coals or some other vegetable Sulphur, fix or calcine it so long, till it be resolv'd in the Air into a fiery liquor, then the preparation is finished. But because that sort of earth, from which this salt is extracted, cannot be found every where, in its stead, you may take Nitre well cleans'd, which must be melted in a Crucible, upon which you must cast a small quantity of coals and that so long, till the coals upon the flowing Nitre will take fire no more, but remain dead upon it, for then your Nitre is fix'd and prepar'd, so as from it, this so admirable water may be made, which is made after this manner; While the fix'd Nitre flows yet in the Crucibele, pour it into a brass mortar that in that it may cool, then beat it to powder, and spread it on a Glass table plac'd in the Cellar, or some other moist place, that there it may flow; so you have that fiery water which is endowed with so many wonderful virtues in the preparation of medicaments of vegetables, Animals and Minerals, of which I made mention before. But if you wou'd make such a liquor of *Tartar*, which will be best for preparation of Medicaments of vegetables and Animals, then you must bring common *Tartar* made pure by Calcination, Filtration, Solution and Coagulation, and by flints purg'd from all impurity, into a fair and bright Salt, mixing six or eight parts of the purest *Tartar* with one part of flints well pulverated, which mixture you must melt in a cover'd Crucible, and pour it into a brass Mortar to cool: This bright and white fiery mass you must reduce into powder and put it into a Glass body, and pouring rain water thereon, boil it upon hot Ashes, for then the rain water will dissolve the *Tartar* only, and leave the

Flints at the bottom, like a Mucilaginous matter which draws to it self all the impurity of the *Tartar*, which before, by the common solution and filtration cou'd not be taken away, and so keeps it, that the Salt of *Tartar*, is by this means freed and purg'd from all impurity: then you must filtrate this solution, and draw the water from it by a limbeck, that so that Chrystalline fiery liquor may remain in the Glass: And this is that preparation by which vegetables and animals are reduced into the best medicaments; but to prepare metallick Medicaments, and especially for the making them better, liquor of *Tartar* is not to be added, but only liquor of the Salt of fix'd Nitre, which is not prepared by coals, but by the Regulus of Antimony, and that after this manner;

Put three parts of clean and pulverated Nitre to one part of Regulus Martis, put this mixture into a Glass wash'd clean, and by a prudent increase of fire, make it boil a little in a Fixatory Furnace, and in this degree of fire, leave it five or six hours, then take it out that it may cool, then very finely pulverize it, and pour upon it rain water, and the Nitre, which by the Regulus of Antimony comes out fix'd, wash out; and lastly abstract the water, so you will produce a fiery liquor fit for use in metallick operations.

NB. This fixation may be as well made in cover'd Crucibles, as in Glasses, and is good enough, only the management of the fire must be observed, neither let the heat from the begining be too intense, least your Nitre evaporate before it be brought to a fixation, but keep a gentle fire, and it will effect the fixation in conjunction with the Antimony.

The Praxis. How by the mediation of this liquor Vegetables, Animals, and Minerals may be

converted into good Medicaments.

Take an herb, root, or seed, beat it very small in a stone Mortar, then put it into a glass, and pour upon it so much of this fiery Menstruum, as that the herb may be sufficiently imbrued in it, afterwards set it upon sand some days, or boil it, that of the herb and Menstruum may be made a thick liquor, which done put to it as much spirit of Wine, well dephlegmated, as there was of Alkahestick Liquor, and well mix them, in a small heat, lest the spirit of Wine evaporate; so long digest it, till the separation shall be made, and your Alkahest, with the fæces, will go to the bottom, but the spirit of Wine, with the Essence and Virtue of the Herb, will stay at the top, which afterward, though never so much stirr'd, will not mix, but each remains still in his own place: pour all that whole matter into a wide-mouth'd Glass, and there let it settle; then separate the Medicine which the spirit of Wine has extracted from the Herb, with a gentle inclination from the Alkahestick Liquor, which retains with it self the fæces of the Herb, so you will have the Virtue and Essence well corrected and perfectly ripen'd in the spirit of Wine, which abstract from the Essence of the herb in a Bath, and the Medicine which remains like a red juice, and endowed with great Virtues, keep and use it as it is ordain'd by God and Nature. But the Alkahestick Liquor, mixed with the fæces of the Herb, Calcine in an earthen Vessel, that all the relish and scent of the Herb, which remains in it, may be exhal'd from it, and afterwards dissolve it in Water, and filtrate it, and draw it to a fiery Liquor, so it will be as good as it was before, and you may put it to the same uses as often as you please.

Animals are to be bruised after the same manner in

a Stone Mortar, and with the Alkahestick Liquor digested, and by spirit of Wine separated, and in Vegetables the labour is the same.

But Metals in their proper Corrosive Menstruums must be dissolv'd precipitated, wash'd, edulcorat'd, exsiccated, and then lastly with the Alkahestick liquor poured on, digested, dissolved, and with spirit of wine separated and reduc'd into a potability.

But Minerals which may be pulveriz'd need not be dissolv'd and brought to a calx, but 'tis sufficient, that after pulverisation with the Alkahestick liquor poured on, they be digested, and by spirit of wine separated.

Nevertheless, you may also at your pleasure render metals brittle and frangible, *viz.* By the help of the Regulus of Antimony, so that they may be pulveriz'd, then pouring your Menstruum upon them, dissolve, digest and convert them into Medicine: Which method is certainly good; You may also proceed another way with metals prepar'd by Antimony, *viz.* Mix them with three parts of pure Nitre, and in a Glass or earthen vessel, by the dry way dissolve, digest, fix, and by spirit of wine prepare into Medicine, which also will be good, for it is more profitable to operate by the dry than by the moist way, as it is customary to be done in vegetables and Animals.

And this is the shortest method of reducing Animals, Vegetables and Minerals by the Alkahestick liquor to the best Medicaments.

But how imperfect metals or Minerals, which otherwise in a Cupel or Cineritium trial, leave no gold or silver behind them, are to be brought to maturity and fix'd, that afterwards in the Cineritious

trial, they may give a perfect gold and silver is done another way, whose process is this:

Mingle and melt so much (Regulus) of Antimony with the imperfect metals or minerals as may render them friable, that they may be pulveriz'd, with these mix three parts of the purest Nitre, and this mixture close stopt up, put upon a fire in glass or earthen vessels to fix for some hours, afterwards take it off, and as they are melted pour them out, that they may give the regulus which is to be taken away, and with lead put into a Cupel and reduc'd to dross, then that gold and silver which the imperfect metal or Mineral got in the fixation, stays in the Cupel which may be examined by the lesser weights of probation, whence it will appear how great a fixation so little time will produce.

This is the plenary and fundamental instruction of the use of *Tartar* purg'd by flints, to extract the essence of vegetables and animals and of Nitre fix'd by coals and Regulus of Antimony, which begets a penetrating, correcting, bettering or ripening and purifying fiery, but not corrosive, virtue, which goes beyond all things, penetrates and corrects as above written, I have attributed to it. But least the ignorant of natural things should esteem and proclaim this a corrosive liquor, we will prevent them, and shall endeavour to demonstrate, that this liquor is no way a corrosive, but an enemy to and destroyer of all corrosives.

Like loves its like, with it is mingl'd, and immutably stays with it, as may be seen in spirit of Salt, Vitriol, Alum, Nitre, Vinegar and other corrosive spirits when they are mixed. But unlike things if they are join'd, are contrary to themselves, and fight against each other, and forcibly withstand

one another so long, till the strong o'er comes the weak and kills and destroys it or produceth another substance from it: that may be seen if this fiery liquor of *Tartar* or Nitre be mix'd with a corrosive Spirit, for it can not consist with it, because contrary to it, then which of these is the stronger, destroys the weaker and takes its nature to it self.

And this difference arises from the unlikeness of the nature of either liquor, for one corrosive does not destroy another, as also one fix'd urinous liquor does not destroy another urinous liquor; because one contrary fights against another contrary, but not against his like, so 'tis true, as hence may be fully demonstrated, that this fix'd liquor of *Tartar* or Nitre is not corrosive, but only a fiery water and a perpetual enemy to all corrosives, and both kills and takes away their corrosive faculty from them. But some will say that the corrosive Spirits of Salt, Alum, Nitre, Vitriol and such like are fiery waters: I confess it, but yet with this distinction, those Spirits are indeed hot waters, but not vivifying, but rather cold and killing fiery waters, which no way ripen, purge or correct Vegetables, Animals and Metals, but destroy and kill all things they are mix'd with. But the fix'd liquor of Nitre or *Tartar* is contrary, and ripens, purifies and brings to perfection all it is mix'd with, which is impossible to all corrosives, whence it is as clear as the Sun, that it is no destroying corrosive, but a correcting fire.

Now follows another Clause of *Farnner*'s Epistle.

2. *All Mineral's and Metals.*

I much wonder that *Farnner* was not afraid to offer this process to others at a price, which is plainly and clearly described in many places of my Books: and is

done only by Nitre, by which sulphurous metals (but not all metals and minerals, as he vainly boasteth) are reduc'd to dross, from which by spirit of wine, a metallick tincture may be extracted, as we have shewn above in the tract of the Alkahest: that dross is truly fiery, and therefore easily attracts air, and is turn'd into oil, of which I have largely treated in the second and fourth parts of (*Furn.*) and in the *mineral work* especially in the explication of the wonder of the world, as also in my Hermetic Colloquies.

3. Glauber*'s Alkahest.*

In this Paragraph *Farnner* openly betrays his vanity, bragging, and hellish calumny, in reprehending the industry and labour of good men, and boasteth of a more firm foundation than perhaps I know of; whence it will appear to any man of Understanding, what this most ungrateful of men would be at, namely, which is the only thing he can do, he would do what he could to bring those Secrets I intrusted him with into contempt with all men, and introduce his own foolish trifles.

First, he saies, *Glauber*'s *Alkahest*, and presently subjoins another and better foundation or way of preparing it: which if he points at any thing but my Alkahest, why then does not he forbear mentioning and contemning my Alkahest? for he does contemn it, and endeavours to prove, that that way or fundamental is unknown to me. Now he exposes it to sale at fifty R. Dollers.

4. *The Trial of all sorts of Coins.*

'Tis true, *Farnner* did not mention this as a vendible, for it is not worth purchasing with Money of him: for

the common way of trying money has been shewn not only by many provers of Metals, as *Lazarus Ercher*, *George Agricola*, and many others, but I my self also in many places of my Writings, and especially in my explication of the Wonder of the World, have fully and exactly taught it, which *Farnner* can never be able to mend nor imitate.

5. *Flowers of Coral.*

You must know what belongs to this Process that *Farnner* did not learn this Preparation of me, but of another man, which pleases him extreamly, though 'tis of no moment. But he most unworthily calls them Coral Flowers, which he exposes to sale at ten R. Dollers, seeing they are not Flowers, but rather to be called a Cremor; for when in a very hot fire they are reduced into a white Calx, from this Calx, by the help of Water, is drawn a Cream after this manner: The calcin'd Corals are put into common Water, and left in the Water a whole night, then in the top will appear a little skin, as is usual in *Calx viva*, which must be taken off to dry. Lastly, while that is doing, another little skin appears, which is also to be taken off, and that so often, till the Water will give no more.

I know also, that this Powder is held up by some Apothecaries as a certain singular Secret, (but that indeed exceedeth it) which is prepar'd of *Calx viva*, which I have also shewn to some that have attributed great things to this Powder, who, the Experiment being made, seeing me produce true things, What need is there, said they, to burn precious Corals, when common Chalk (or *Calx viva*) will give the same thing as Corals, and they prepar'd no more Powder of Corals, but of *Calx viva*.

Therefore this does not deserve to be called a Secret.

NB. That Corals, Pearls, Pearl-shells, and Tortoise-shells, as well those that are in the Sea, as those that are in Running Rivers, if they are burnt together, are brought into a true and natural Lime, like that which is made of burnt Stones, needs no probation. He that will not believe me, let him go to *Holland*, and other Sea-Ports, and he shall see that the men of those Countries do not use Lime made of Stones, which are wanting in those places to build Walls, but that which is made of burnt Shells, which the Sea in great abundance casts upon the shore; which yet, is not so good as that which is made of Stones, which some Lovers of Curiosity have also brought them from *Germany*.

6. *To make melted Tin hard.*

And this Paragraph, by right, ought to have been omitted, for it is not worth Ten R. Dollers, requiring no Art in the making it; and I my self taught it many years since, as well in the First part of the Mineral Work, as in the Fourth part of my Furnaces; and it is made by *Regulus* of Antimony, of which one part is mix'd with 12 parts of melted Tin, and no more, for otherwise the Tin would be made brittle, and rendered unuseful; rather if one part of *Regulus* is mingled with twenty parts of melted Tin, it will come out hard enough. And farther, it may as well and rightly be made of *Zink*, as by *Regulus* of Antimony, and needing no great matter of Labour, melts sooner than *Regulus* of Antimony.

7. *White Vitrifications.*

These Vitrifications also, which he exposes to sale at

Ten R. Dollers, are of no moment, for they are prepar'd of Glass of Lead, Tin-Ashes, and Flints, and Wood-ashes.

In *Holland* this Preparation is very common: whether *Farnner* is excellent at it or no, I much doubt; How then shall he teach others? And if he does excel, who will be the better for it? For no man studies these Curiosities, or so much as looks after them, or covets them.

But although Glauber*, &c.*

Here *Farnner* again vomits at me a mighty heap of his infernal Lyes, which are as noisome as any dead Carcass, as if he intended to infect me with their venom; but these stories do not at all agree with his other; for here he saies, Although he had with a great Sum of Money purchased certain Secrets of *Glauber*, yet he had made no Examen of them, but he was forc'd to convert them to other uses. In the beginning of his Calumnious Paper, he thus writes: A Specification of those Chemical Secrets which the under-written Farnner learn'd of Glauber, and in the Trial found True.

Here any impartial man may see what to judge of this double:Tongu'd Monster. Here he denies what before he confess'd; he both calls them *Glauber*'s Secrets, and here affirms, that they never succeeded to his purpose: which if true, Why does he prefix my Name to them, if he never made trial of them? But if they have succeeded, and in the trial he has found 'em true, as he above confesses, Why does he here deny it? Can the same thing be True in one place, and False in another? Certainly I can refute such horrid Lyes no way better than by his own words. For if I should say, See here, there, or in that place thou lyest, he would not care, but answer, He did not

lye at all, but spake the truth; and I might represent a Contest between two scolding Women, one whereof calling the other Whore, and the other throwing back upon her the same things; but this will do nothing; wherefore I shall take another method.

In the first Obligation he gave me, he expresly saies, That I had communicated, demonstrated, and shewn him some Secrets: But if they were not for his use, why did he give me a valid Obligation, to keep those secrets from the publick? Not bent to these things, Why did he in all his Letters (which he sent me, and which are kept safe to confirm what I say) confess, and profess, that he, his Wife and Children, were bound to me, and that he wou'd come to me, that with his he might serve me all my Life.

If none of my secrets have succeeded to him, Why did he give me long since a new Obligation to be grateful to me? as I have demonstrated from his obligations and extracts out of his Epistles.

NB. What! Cou'd he not make trial of those things he had of me, in eighteen Months time? But if the trial has prov'd the truth of those things, and he has bound himself to me by a new Obligation; Why then does he dare to say, That none of those things which I communicated to him, prov'd successful? Why two years after? Now he is alienated from me, and having broken his Promises of coming to me, and working with me in my Laboratory, (being married again) is an Excuse for his absenting himself, yet he asks me to communicate to him more secrets, and then he'll come. *NB.* But if the first secrets have not stood the Test, why does he desire more of me?

For he might know over and over in two years time, whether my Writings wou'd conduce to him or

not.

In one Epistle, in which he boasts of killing a man, he writes thus: Wherefore I again and again intreat you not to cast me off, but do to me according to your wonted Favour. I will on all occasions, as I have promised, in my place, satisfie you; neither will I cause that any thing should therein be desir'd; for which reason also I will effect it both better and sooner.

From these and the like words, which in two Epistles he us'd to me, I could collect nothing of Fraud, and perhaps at that time he meant none. But when he had kill'd that Man, and married another Wife, all his Promises and Obligations were to no purpose. And from that very time, all his endeavours have tended only to do me what hurt he could, and he daily hates me more and more; which at last appears more publick in these his lying Calumnies.

Indeed, I am apt to think the Devil and *that Murder* had possessed his Heart. NB. For his Epistle to me witnesseth, that for fourteen daies together he had sought occasion how he might catch that man with his Wife, and bloodily revenge himself upon him; I suppose, by the instigation of Satan, whereby both the Man was kill'd in his Sins, and the Woman with many wounds compell'd to a lewd kind of Life; of both which Crimes *Farnner* is yet guilty in his own Conscience, and (unless a speedy Repentance follow on his part) he will never be freed from them. But if in a sudden passion he had done it by chance, he might merit some excuse.

But to endeavour it fourteen daies together, is nothing but a Devilish Revenge and Cruelty, which can by no means be excus'd in a Christian, though he do it never so secretly.

But besides, he uses evil Arts; for he drew my Servant to him by Flattery, and receiv'd him into his intimate friendship, notwithstanding he knew I turn'd him away for his infidelity. What he writes, that he bought his Secrets of me at a great price, is a pure falsity. Indeed he forc'd a small Reward upon me, half of which I gave him back again, and what I kept he got over and over by communicating my Secrets to other men, so that he has fully receiv'd what he gave me; and by this his communicating to others, (which was done unknown to me) he broke his Promise; which nevertheless for Peace sake I passed by. Wherefore, if he will confess the Truth, I am sure he can never say that he bought all those Secrets I intrusted him with, at so great a price.

Hitherto we may believe how much Money has come to him; for since he has sent abroad his institory Letters five months ago, (nay, as I am told, two years ago) before I could know it: he could not chuse but get money by it, when forthwith he with my perfidious Servant proceeded to that insolence, as in a knit Society with some of *Frankford*, he caused his Calumnies to be every where spread, and sent abroad, not only throughout upper *Germany* and *Belgia*, but also into *France*, and other Foreign Countries, to get Money. Yet, according to my hopes, this institory Ware-house (by the Grace of GOD) will soon fall.

8. *Plenty of Spirit of Salt.*

In this Paragraph also he goes on after his manner to disgrace me, accusing me of Lyes, as if it was false, and impossible to prepare fifty pound of Spirit of Salt in one Furnace, and in one day; and adds, that this Spirit is not so good as his, for *Every man for himself*:

but this is done by adding Vitriol.

Which Vitriol does not hurt the Spirit of Salt, as is demonstrated in many places of the First Part of my Furnaces; and he denies that fifty pound or above may be prepar'd in one day in my Furnaces, when yet it may be done commodiously enough, and needs no farther proof.

From all which a wise man may easily judge how good a Christian *Farnner* is, whose mouth uttereth nothing but wickedness, contempt, and contention, and except my inward faculties fail me, the envy of his heart, his hatred, lyes, and infernal calumnies, shall be display'd.

What is his spirit of Salt to me, or mine to him? Let him prepare it after his way, and I will do it my way, when need requires: Wherefore does he endeavour to defile my things with his, since they cannot be deservedly reprehended by any man, much less by him.

9. *Spirits of Vitriol, Nitre, Salt, Aqua fortis, Aqua Regia, in plenty; also Sulphur; at Forty R. Dollers.*

In this place may be seen the inhumane and devilish nature of this wicked fellow; for he scarce utters three words but he proceeds to my disparagement.

But what hath *Glauber* to do with his spirits, for he does not use them? and if he does need them, he can make them without him.

What does he care, if you can prepare them after a better way than he, which yet never can be?

Whatever *Glauber* has writ of these things is worth the reading; and he can defend both himself and it,

neither can you or yours spot his fame, which is so well known to the World.

10. *Mineral Spirits: for twenty R. Dollers.*

Here *Farnner* ventures to promise a way of preparing volatile spirits, which is eight years since fully described by *Glauber*, in the second part of his Furnaces, whither I referr the Reader.

11. *Flowers of Minerals and Metals; for Twenty R. Dollers.*

But if any man will explore another man's nature, let him permit him to speak, and he shall easily know what temper he's of; but especially that, of all things, may easily be discern'd in a drunken or angry man, who can very hardly conceal his internal blemishes. In like manner we may see by *Farnner* that he endeavours to hide his lying Proceedings in my name. What if I had seen his way of preparing metallick flowers, what profit or loss should I sustain by it? He glories of those things which merit no praise. He promises to make metallick Flowers under a frixatory Cover, when yet Flowers can't be made under it, for they are not Flowers when the metals are burnt under a frixatory Cover, into a Calx, or reduc'd to ashes, there is, and so remains a heavy Calx: but the Flowers of metals shou'd be brought to a very light sort of Flowers by Sublimation; as is describ'd at large in the First Part of my Furnaces.

Farnner indeed, with his Shop, leaving his filthy knife, should rather have gone to the Chymical School a little, than (being ignorant of Chymical terms) sold his heavy Calxes or Metals to other men for light Flowers, and despised *Glauber*'s way of preparing Flowers, which yet has been reprehended

by no man. These his Flowers, with his Coral Flowers, are course Meal, which don't deserve the name of Flowers, but Cream. Indeed, if *Farnner* had not so vehemently inveighed against me, I had not display'd him thus, nor deign'd his vain Proceedings one word of answer.

Yet 'tis no matter, though good men are sometimes in this life bark'd at, and provok'd by mad Dogs, since it often happens that by this means excellent things are made publick, which otherwise would lie secret.

12. *The Quintessence.*

Here you may see, candid Reader, that wicked *Farnner*'s endeavours tend to disturb the quiet of all good men, and destroy my well-grounded and yet irrefutable Writings by his foolish Opinions, which he shall never be able to do, no more than a little Whelp is able to attack an armed man, whom by his barking he cannot hurt.

My Tract which I writ of the Essence of Vegetables, and printed at *Norimberg*, under the Title of *The First Part of the* Spagyrick Pharmacopæa; neither *Farnner*, nor any man else, could reject or contemn; but that little Tract will defend it self.

I have made publick many and excellent inventions, but no man can shew one place wherein I reprehended and brought into contempt other mens Works, as this *Farnner* does. If he would act as a good man ought, and had any thing against me, he should speak it to my face, and not abuse me so wickedly behind my back.

13. *All acid Wines.*

It troubles me Indeed, that I communicated this excellent secret of encreasing the Virtue of acid Wines, and making them better, to *Farnner*. What he writes, that he found out those things, is a pure Lye, which he had of me; when nevertheless he is not afraid to tell so impudent a Lye, as that he had found out a better foundation of that Secret, which is most notoriously false; for neither he nor any other man, nor I my self, can find any thing better than the pure Essence of Wine, conducing to that Work; which Essence of Wine, by the strength of its innate fiery Nature and Property, all sorts of immature Wines may be ripen'd in fermentation, and turn'd to a brisk Staple, and good Wine, in which lies all the Art.

For he that knows this, may also correct acid Wines, yet let him have a care that he does not take foul Brandy-wine, as *Farnner* has done, wherewith he has done it, as he saies.

This excellent Art, and heretofore unknown, to him that knows how to handle Wines, may serve instead of many; and this unfaithful *Farnner* might have receiv'd much profit from it, if he had not made it publick; but since he has every where publish'd it, there shall henceforth no profit accrue to him nor me, if I should be destitute of better things, for he has defamed this excellent Secret every where by his lying Epistles sent abroad.

As for me, though he has taken from me the great profit which redounded to me from it, by his prating and lyes, I do not this from such a trouble of mind as will happen to him, if he shall be forced indeed to want all its fruit.

If this perfidious *Farnner* had hid this Secret, he would have needed no other Arts, neither need he have sold it for an hundred Duckets, but he might

from it have procur'd to himself sufficient whereon to live. A greater damage has happen'd to me by his publication than I can declare; and I very hardly endure that so excellent and profitable a Secret should be despised; neither will any good man approve it, especially they that sustain loss by it, and for that cause will alwaies abhorr him. He might have gotten enough by it, in secret, and without detriment to his Neighbour, but that he was minded rather to marr the profit and propagate the damage of not only himself, but me, and many others that have knowledge of it; which no man can deny to be a wicked act.

That Reward which *Farnner* gave me for communicating to him my Secrets, in all amounted to but sixty or seventy *Ungarici* (an *Ungaricus* is Nine Shillings of our Money,) which yet, from the communication of those Secrets I trusted him with, he receiv'd again, so that all those things which he had of me, cost him little or nothing. Nevertheless, he does not stick to say, That he gave me a great sum of Money for my Secrets, which yet I refused to take; and though he twice made a Journey of Fifteen miles to me, that he might get something out of me, yet I deny'd him, and communicated nothing to him, till he came the third time, and learn'd some of my Secrets, and afterwards, when he had oblig'd himself to work with me in my Laboratory, I communicated more to him. Neither had I shew'd him the least of those many Secrets for his Present, which will never compensate the damage I have sustain'd by him, had not he oblig'd himself under the loss of all his Goods, as also his Credit and Reputation, that he, his Wife and Children, should serve me so long as I should live, as plainly appears from his Obligations given to me.

But if he had given me a Thousand *Ungarici*, or Duckets, and I had known he would have expos'd this Secret to sale, I would rather have given him all of it back again, than suffer'd it to be made common. Neither can his vain Excuse, That he exposes his own inventions, and not mine, to sale, profit him any thing; when 'tis evident enough, that nothing in the nature of things can be found, which may render small Wines better than the *Anima* or Quintessence extracted from other Wines; for the *Anima* of Wine only, and nothing else, can encrease the strength of Wine. Neither is the comparison of this melioration of Wines incongruous with two torn Garments, neither of which can be worn; but if either of this is cut, and that which yet is whole and good, is sewed to the other, and so of two torn, one whole Garment is made; then that Garment may be worn, when yet, before, neither of them was useful.

The same also is to be understood of small wines that are neither durable nor vendible, but after one Hogshead is strengthen'd by another, it becomes not only durable, as good Wine, but vendible, and will yield as good a price as two small Hogsheads. And this Secret is both very noble and profitable in those places, where the wines are seldom brought to maturity, and for that cause are not durable nor saleable. For there is a lamentable Complaint among Vintners, that immature wines are not vendible, and they can get no money for them. Thus they say, Have we labour'd in vain with our wines a whole year? Look there the wines lie, and no man buys them: in the mean while we suffer want and can't make our selves merry with our wines, for they neither profit us nor others; unless we have presently some other better wine, wherewith to mingle this, and so render it vendible, it will strait be corrupted, and turn'd to

water. These and the like Complaints I have often heard from Vintners; but if they had the wit of Taylors, that can make one new Garment of two old ones, their affairs would be in a better condition, for after this manner they might preserve their acid wines, and there would be no need of mixing better wine with them. For which excellent Invention, all men that deal in wines, ought to thank GOD and me.

I pray, who would not have communicated these things to a man that had given himself for a pledge? But if he must not stand to these Obligations, I can't see whom we may trust. I curse the unhappy hour wherein this unprofitable subject and that perverse man (if he may be call'd a man) came first in my sight: which troubles and molestations he brings upon me in my old Age, which might spend its time much better, than by refuting his detestable Calumnies. Neither does his wickedness to me hurt me only, but my Children also.

In his last Obligation he promises, That if by premature death I should be taken out of the world, that he, for the kindnesses I had done him, would adopt my Children for his own, and make them his Heirs: but here, in his most false writing, endeavours all he can to deprive my (yet young) Children of their own, and convert their Goods to himself, as indeed he has done.

Further, He in his last Obligation also saies, he humbly pray'd GOD to prolong my Life and Health, but in this place he endeavours by his Cavils and Calumnies to kill me, and if he could do it with his own hand, (which God forbid) I believe he would not stick at it: It is a small thing with him to spill Man's blood, for he has experienc'd his ability that way.

I indeed esteem it the Goodness of God to me, that

it is His will, perhaps, that this should rather turn to my profit than disadvantage; for hereby I am taught to be wiser another time, and to shun humane Frauds.

14. *All Wines.*

Here any wise man may judge whether or no this thing deserves to be sent into Foreign Countries, and there to be sold at a price; when there is no Countryman that does not know that Wine assumes the relish of the Herbs, Flowers, *&c.* which are steeped in it.

15. *Brandy-Wine of all sorts of Corn.*

That *Farnner* brags of this knowledge, he owes it to GOD and me, from whom he had it: For when at first he complain'd to me, that he could not keep the Corn from burning in the Still, and so make the Brandy-wine stink, I upon his intreaty communicated this Secret to him. But because *Farnner* so much glories of this knowledge, he shall not enjoy it long. I must confess, indeed, that this Secret is not of less value than that whereby wines are meliorated; neither does he get less by it: but forasmuch as I resolve to buy all his Wares every where of him, I will neither leave him this, that he should be free from the trouble of informing others in this thing, and that otherwise would be forced to make long Journeys to buy them of him, may leave off those Journeys, and take this way of preparing it: Take as much Corn as you will, whether Barley, Rye, Oats, or Wheat, steep it in sweet water for some days, then place it that it may sprout after the same manner as Corn is Malted for the making of Beer; turn it well for a certain time, lest it be corrupted by too much heat: then when it is well sprouted, spread it abroad, that it may presently

cool, and it will never sowre.

But if you would use it presently, then take as much of it as your Destillation will require, and in a Kettle full of water, boil it so long, till the grains are broken, then pour it into a wooden Vessel, and when it is luke-warm, add to it the fresh dreggs or grounds of Beer, and let it ferment; when it has fermented enough, which is usually at the end of two or three daies, then Brandy-wine is made in a common Still, by destillation from that Corn; what remains in the Still will serve to feed Oxen, Cows, Hoggs, or other Cattel.

But the Brandy-wine which proceeds from thence, must be rectified, as the way is, and by this means it is render'd more sweet and grateful to the relish, than any other Brandy made of Corn: the reason is this, That all Bread-Corn, of which Brandy-wine ought to be prepared, if it be put to ferment presently after softening, it is necessarily in the still, by boiling, reduced into a pap, and so being corrupted by a dustion, produces a stinking Brandy-wine.

But this protuberating and burst Corn cannot be burnt, and therefore makes good Brandy.

Also the Corn may be broken on a Mill-stone, water poured upon it, and distilled out of a Still, placed within another, or in a Kettle full of water, so also it cannot be burnt; yet this way it will yield but little.

NB. But if any man will give this Brandy a relish, like that made of the Lees of Wine, then he must rectifie it upon the Lees of Wine, for this way by the Oil of Wine, which is plentiful among the Lees, he acquires his ends, and in all things he may use this

instead of that.

NB. Also, he that will, may, without this previous coction and fermentation, pour the budding Corn hot into a vessel of luke-warm water, for by this means the Corn begins to ferment of it self, and needs no other Lees to its fermentation; yet it does not produce so sweet a Brandy, as if it had first been boiled: for by coction the ill taste is taken from the Corn, which the Brandy otherwise retains. Further, also it produces much more Brandy, if the Corn is so boil'd, that it may be broken. And this, good Reader, is a most excellent and profitable Secret, and will bring you in much wealth, if you use it rightly, and you may make great quantities of it.

Farnner did no man wrong, by taking (according to his own estimation) a Hundred Duckets for it, for it is worth much more, especially if the residue of the Corn pays the charge. Yet no man hereafter will give him so much for it now 'tis made publick.

Indeed it is injurious to me to divulge it, but because it is now in the foul hands of *Farnner*, 'tis better that others also enjoy it, than that he only should reap the benefit of it. But though by my communication *Farnner* should put on a Lyons skin for his defence, yet he can't hide his Asses ears under it; as appears from this Paragraph, where he writes, that he had sent four measures cross the Seas, to try if they wou'd bear the Sea-water; for then he thinketh he hath made his Port. Good God! how resplendant is the Wisdom and Philosophy of this *Farnner*! Certainly, if he shall make one or two Experiments of this kind, that his Brandy-wine will bear the water, he'll duly merit to be created the chief Professor in the Academy of Idiots, for that will befit him, seeing that the reason is not hid to him, as

he writes; wherefore Drinks are alter'd by the Sea-waters.

But he will make his first Experiment in these four measures, and if it proves well, then he promises to teach this Art at a price.

O the blindness of this perverse World swelling with Pride! Who ever heard that a good burning spirit, whether made of Wine or Corn, will be corrupted by the sea-water? I grant it may be corrupted, if it be invalid before: But a good and firm burning spirit will never be corrupted by sea, for all wines bear the water, those only excepted which labour with a defect of spirit, but strong wines very seldom, for the more spirits there is in any Liquor, whether Wine, Beer, or Metheglin, it is in the less danger of being corrupted.

But if the spirit which is in wine, be its preserver, and defender from Corruption, How comes it to pass that Brandy-wine, which if well prepar'd, is nothing but spirit, should be corrupted? If the Spirit in wine be the Preserver and Defence of the wine, which yet is weaken'd by a great quantity of water, so as the wine remains good, and is safe from the corruption of water: Why then should not it defend it self, since it is so strong and free from water? Who doubts that a concentrated Life is able to perform greater things than a diffuse and weak life?

Hence you may see how great knowledge *Farnner* has drawn from the light of Nature, that he should boast so.

16. *To strengthen all sorts of Beers.*

In this place *Farnner* again shews his Asses ears, when he writes, That he can strengthen Beers, that they

shall not be inferiour to Rhenish wine. Here every wise man may discern how great and stupendious this man's folly is.

Behold, he attributeth the goodness of Rhenish Wine to its strength, which indeed is a great errour; for the goodness of Rhenish-wines consists not in their strength, but sweetness. French Wines are far more fragrant than Rhenish, yet in sweetness and soundness it comes not near it. So likewise *Hungarian*, *Greek*, *Italian*, and *Spanish* Wines, *&c.* are much stronger, but for sweetness, as well as goodness and wholsomeness, Rhenish wine, far better, although the other excell it in strength. And so this is a great absurdity: Indeed Beer may be strengthen'd, by adding a burning spirit to it in fermentation, whereby it may endure the longer; which thing I can't deny, and it ought to be done: but that a Vinegar may be drawn from them like Wine-Vinegar, is a pure story; for though it may happen that Beer may give a strong Vinegar, yet it never yields Wine-Vinegar, for a great difference may be discern'd between Wine and Beer-Vinegar, though they have both the same strength, if you make trial of both: Whence it appears, that *Farnner* is ignorant what Vinegar is, because he knows not the difference of it.

Strong and right Wine-Vinegar is known by these Trials. First, if it be shaked in a Glass, it by and by receives its clearness, and leaves no scum, dreggs, or bubbles, on the top, as Beer-Vinegar does: for let it be never so strong, it retains its own nature, and causes a scum, if it be shook just as the Beer it is made of: but Wine-Vinegar leaves no scum. Secondly, the longer Wine-Vinegar is boiled, the stronger it is; the reason is this, There is naturally in

it an innate sharpness, which is not volatile; but the sharpness of Beer-Vinegar consists in its volatility, which in boiling is abated; so that the longer it boils, the weaker it is. And these are the two chief and most certain trials of Vinegars, which *Farnner*'s Vinegar will never bear, and therefore will still be Beer-Vinegar, and does not deserve that it's Preparation should yield Fifty R. Dollers.

Acid or Sower Beers.

What belongs to this, requires nothing of Art, neither is it worthy to be taught at a price when every Country man can do it, by projecting and well stirring in a vessel of acid beer, two or three handfuls of beech ashes well sifted, made wet with a little beer, and leting them lie in it about eight days, for then the ashes by reason of the Salt which is in 'em takes away the sowreness of the beer, and make it drinkable.

NB. If the beer be not too sowre, a handful of sifted ashes may be sewed up in a linen bagg, and put into the Beer through the bung, and there left for this way the Beer may be preserv'd from sowreing and need not be stirred nor troubled. Also some handfuls of wheat put into the beer, draws its sowerness from it, the same also is done by egg shells, Crabs eyes, Tortoise shells, Sea shells, calx *viva*, and such like things which attract the sharpness, and turn it into sweetness.

But whence is it that *Farnner* now so abounds in the knowledge of wines and beers, when yet but two years since, when he prepar'd and sold brandy wine and beer, that he complain'd to me, that he had sustained much damage in handling them, so that he shou'd perish unless he learn'd how to take away and

remedy the burning of Corn in the Still, the ill smell of his brandy wine and the sowreness of Beer. Why cou'd not he then help himself, and beware of those Losses? he will object that at that time a certain light shone upon him, by whose benefit he knew Nature. However true his objection be, it will never induce me to believe that this light cou'd in so great a measure so suddenly help him, which is a great absurdity: for so much knowledge is given to no man in a nights sleep, it is a false story. But that my faithful instruction, with which I instructed him, has enlighten'd him, and like a guiding star led him in the right way, is most true, tho he is unworthy of those precious Pearls which like a wild boar he treads in the dirt under his feet.

18. *Vinegar of Corn.*

What belongs to this Paragraph, is demonstrated in the sixteenth paragraph, that tis impossible to make a vinegar of Corn, like that of wine: wherefore this cannot (as he thinks) deserve fifty R. Dollers.

19. *Vinegar of green Woods.*

Indeed I wonder that *Farnner* is not ashamed of these things which I have many years since so clearly describ'd or to bring them to light anew, that he might get money by teaching those things to others, which are already published in the first part of *Furnaces*, And so he adorns himself with other mens Feathers.

But he will object, I have in the trial found these things true, and therefore describe them, but he does it to this end, and to no other than that he may cheat them of their mony who did not know that I had so long since writ of them. He that desires any of these

things, may find 'em in the first part of my *Furnaces*, and he shall not need to give *Farnner*, ten R. Dollers for his instruction herein.

20. *Altho* Glauber*, &c.*

Here he contemns my way of extracting *Tartar* from the lees of wine, when yet it was a year since clearly and perspicuously describ'd and published at *Norimberg*, which *Farnner* cou'd never correct. But he bragg'd that he had found by a certain position another compendium, which indeed might be, since it is easier to add something to an Art once found, than to find the Art it self, but it does not become him to disswade men from this Art which is already described, and which may be had gratis, and to despise it and bragge among all men of his own inventing a better. What good men will think of these bold malignities may be easily judg'd: but if I had writ nothing of these things, who would have taught him that there was *Tartar* in the lees of wine? But I not only found and writ what was in them, but also largely taught how they might be usefully extracted.

Yet this trifler dares as impudently, as falsly say, that he had corrected it, and added to it, and therefore wou'd not let it go without his price.

After the same manner he deals with my other secrets (which, tho he had them of me, he braggs that they are his own) with which he proceeds, as with the lees of wine, namely with my Alkahest, Panacæa, Melioration of wine, compendious distillation of Corn, preparation of vinegar, correction of beer and others in many places.

Whence cou'd he have known what was meant by

my Alkahest and Panacæa, or how small wines and and beers should be meliorated, how Corn without adustion shou'd give plenty of burning spirit, and whether there was *Tartar* in the lees of wine or not, and how it might be extracted thence, except he had seen and learn'd all these things of me? of which also I had many years since publickly made mention in my writings, which is so well known that he cannot deny it, how much soever he opposes the truth.

21. *All Copper Ores.*

In this place *Farnner* teaches that Copper Ores are to be separated, when, yet they are not separated but melted, that thence the Copper may come forth, which Copper if it contains silver being mix'd with a due weight of lead, it is separated: but Mines of copper are never separated, which he does not understand, and so he betrays his ignorance in these terms. This way of separating is sufficiently known, and every where where copper mines are found, is wrought in abundance and cannot be hid. He that possesseth Copper mines, will easily find men that will thence elicite the copper, and afterwards separate it, neither will any man need to go to *Farnner* on that account. Indeed I wonder at his extream impudence, that he was not afraid to promise that he wou'd teach others so many Sciences, of which if he knew the half part, his village wou'd not hold all the furnaces he wou'd need for the demonstration of them.

Further, for these and the following Sciences, which yet; are the most difficult and laborious of all, he requires no money, but for a certain reward promises to demonstrate them all.

22. *From Tests and Cupels.*

He has drawn this separation also from my writings, that therewith he might fill his calumnious letters: neither do I believe he cou'd do it before he had seen me do it. It is done by the powder of coals, as I have plainly described in my Chymical Colloquie.

23. *Gold and Silver.*

This Art Lazarus Eicher has described, but because his way is too hard, I have shewn an easier in the explication of the wonder of the world, and there the following melting Furnaces are also described, and therefore I need not say any thing of them here.

All these inventions which *Farnner* braggs off as his own, are mine; for my unfaithful Servant taught *Farnner* those Furnaces which he learn'd of me.

And at length,

I have nothing to say to these four last paragraphs, because they don't concern me as the former doe, and *Farnner* himself exposes them as speculations and not as experiments, as I also believe that they are only fancies and foolish imaginations: yet there is one thing which I must answer, which he mentions in his third paragraph, that the time will come when *Glauber*'s Alkahest must be forc'd to hide, altho it is not wholly to be rejected. But if it be so unprofitable that it must hide, why does he expose this to sale at fifty R. Dollers, and the Panacæa which is prepar'd with it, at thirty? and he has already got sufficiently by it: if it be so improffitable, why then does he offer to Sell it to others knowingly and willingly at a price? If *Farnner* has rightly term'd my Alkahest unuseful and must be forc'd to hide, he has surely deceiv'd many. But I confidently assert, that my

Alkahest will never hide, but defend it self in all places: Perfidious calumniators, thieves and their accomplices shall hide, but not my Alkahest. If he has found out better things than I, let him publish them as I have done, that every man may judge whether they be true or false: Why this boasting and wicked vanity in despising others? For truth needs few words and less braging. In his writing in which he sets down the value of every Secret contain'd in the last paragraphs, namely, from the twenty first to the twenty eighth, he promises to teach other men for no certain price, but on courtesy, those secrets which yet are the best, if he cou'd know them. But if he can effect those things and teach 'em to others, he wou'd not certainly teach them gratis, for 'tis impossible for him to build those Furnaces requisite to the making of those things in half a years time.

From which it sufficiently appears how ignorant he is of what he writes: Certainly if his wares which he had of me gratis, should find Chapmen, no doubt but in one year he would get some thousands of ducats.

I thought fit to answer you these things now, that I might shut your foul mouth which was so wide open to lyes, but if after this you don't cease your lyes and calumnies, you will compel me to use other means to bridle your malice. In the mean while I doubt not, but all good men in this short Apology (in which I have not refuted thy lying calumnies with indecent or contentions words, but from thy own obligations and hand writing) will plainly see how wickedly and perfidiously thou hast behaved thy self towards me. This damage which thou hast done me, neither you nor all yours both present and future faculties, nor all thy servants can ever repair: It remains therefore, that I say with Job, God gave, and God has taken

away, blessed be the name of the Lord. But I don't believe you will escape divine punishment, to which I commit my cause at this time. It is certain that every thing has its time, which I also patiently expecting your downfal (when God shall take upon him the patronage of a just cause,) perhaps with these my eyes shall sooner see than hope. Indeed I wanted not matter to dispute these things more largely, but that for a reason known to my self, I was hinder'd in doing it at this time. But as soon as I can, God assisting me, I shall not be wanting to propose to all impartial men in the world, questions to be resolv'd, from which every ingenious and good man may see, animadvert and give judgment, how ungrateful, perfidious, unjust and inhumane thou hast been to me.

Miraculum Mundi;

Or, A Plain and Perfect Description of the admirable Nature and Property of that most powerful Subject, called by the Antients,

The Universal Menstruum,

OR,

The MERCURY of PHILOSOPHERS.

By which *Vegetables*, *Animals*, and *Minerals* may easily be Transmuted into most Salubrious Medicines, and the Imperfect Metals into Perfect and Permanent.

A Preface to the Reader.

To whomsoever this little Book (treating of the Propriety, Nature, and Essence of that incomparable Subject, by the ancient Philosophers called, The Universal Menstruum *or* Solvent*, shall occurr, and is offended in reading of those great virtues by me ascribed to it; and because he understandeth not the thing, judgeth it not to be credited; I would have him know, that whatsoever power I have attributed to it, that that is in no wise a Figment, Dream, or vain Opinion, but to be taken for a Truth, found out by a diligent and manifold Practice. But which will be most profitable, for me to prostitute all my inventions to the World, or conceal them? For which cause I will (at least for the present) only point at many wonderful things which may be performed by this universal Menstruum, but not treat of them, leaving it free for every man to believe my sayings as far as he pleaseth; but if they shall be credited by no man, it shall not disturb me, it being sufficient for me to have shewed where and by what reason, the truth or secrets of nature are to be found.*

As for the Subject whose nature and operations I have determined to touch upon, it is like to that of which I have made mention in my Mineral work*, by the signal name of* Alkahest*, which appellation I have there demonstrated, not to be imposed upon it without reason. But seeing that long since the chief Menstruums of some Philosophers, were called by the same name, and that I know not whether theirs were like to mine or mine to theirs in nature and virtues, shall not much trouble me; for it matters little for diverse Menstruums to be called by the same name, although they do not answer one another in all things. For even as wine is wine, although it come from* Germany*,* Italy*,* France *or* Spain*, nevertheless each is wine, although the one exceed the*

other in strength and rellish, as long as the same nature and virtues are found in it, which ought to be in wine: The same is to be judged concerning my Alkahest*: To wit, that if the virtues be agreeably to the name, from whatsoever* Subject *it be extracted, it rightly meriteth the same name, which that it may the better be understood, I mean by the name of* Alkahest*, a very hot, fiery, dry, and also humid water void of all corrosive power, by which* Vegetables*,* Animals*, and* Minerals*, are dissolved without noise, yet not all in the same manner, and elaborated into Salutiferous medicines, as I have shewed in the* first part of my Mineral work*. And because I have written such things of it, many have endeavoured to prepare such a Menstruum, every one from his own Subject; Impostors also have offered to others, a water plainly corrosive instead of it, fasly pretending that they had obtained the secret from me, and that it is the same which I have described in my* Mineral work*; then one sells that putatious* Universal solvent *to a another at a dear rate, whose nativity and preparation lies hid with the seller, that so the blind leading the blind both may fall into the ditch; which thing, when I knew it, I was constrained whether I would or no, to lay open to the Reader, what is properly the nature of my* Alkahest*, and what are its virtues and powers, so that those who erre, may have a rule by which they maybe able to judge of any other pretended* Alkahest*, whether it be mine or not.*

Therefore this incomparable subject is called an universal solvent, because by its benefit, many incredible things are performed in the preparation of good Medicines, and also in the preparation of metals, yet let no man believe that it dissolveth metals swiftly and violently, like aqua fortis*,* aqua regia*, or other corrosive waters, not in the least, but worketh altogether after another manner,* viz. Vegetables *and* Animals *are*

dissolved in digestion, by the moist way, in which solution, the pure parts are separated from the impure.

And Minerals and Metals also being dissolved in the moist way by its benefit, may be washed, purged and maturated, and reduced either into good medicines, or into better metals, but not with the same advantage and celerity as in the dry way, by which very many incredible mutations are presently performed, to be admired by the inexpert, too tedious here to be treated off. Besides those two ways of dissolving, which (that I might demonstrate the possibility of the matter) I have shewed to some; there yet occurrs another far different from those, by which metals and other Subjects are swiftly, meliorated to the eye, and are maturated, depurated, and transmuted into the best of medicines, and into purer bodies: the reasons of which, solution there is no need to expose to every one, chiefly, because that labour requireth a skilful Chymist and there are few who heartily search into the secrets of nature, but most Chymists vexing themselves with vain processes, understand nothing solid in Medicine or in Chymistry, which imaginary Artists, when they happen upon true writings, cannot reach their sence with their dull brains; they speak evil of the Author, disdaining his industry and unwearied labour, in communicating his talent; whence it comes to pass that he which brings forth any thing of good, finding nothing but ingratitude, chuseth rather to carry his talent with him to the grave, than to publish it to his own damage. And this is the only cause, why I have not plainly prosecuted the use of this Menstruum in the preparing of medicines, and meliorating of metals, but have only pointed at what may be effected by the help of it, that it may be made manifest, what is to be judged concerning it, and whether that which is sold for such by others, be like to that described in my Mineral work *or not: I doubt not but*

many will quickly despond, thinking that their Alkahest *will in no wise perform those things which I here ascribe to my Menstruum, and will also believe the matter not to be so easy, as before they thought it to be, but although it arise from a vile subject, that nevertheless its invention and use is very difficult. For whosoever hath such a menstruum, by which these following things may be effected, he may indeed rejoice in the possession of the* universal solvent *or* Mercury *of* Philosophers*, having a door opened to true medicine and Alchymy. Therefore for the sake of Searchers, I will begin to shew somewhat of its virtues and powers, as far as I may, that the* Magnalia *of* God *may thence be made manifest, and that I may give occasion to every man, to render praise, and thanks to his Creatour, who is the giver of all good.*

Of the Transcendent Virtue, Power, Nature, and Property of this Wonderful

Universal Menstruum.

It is worth our noting, that three Operations especially may be performed by the benefit of this *Menstruum*.

I. It maturateth all Vegetables and Animals, being dissolved into a Liquor, and taking away their Venom, converteth them into salutary Medicines.

II. It dissolveth Minerals and Metals, as well by the moist as by the dry way, correcteth their venoms, ripeneth and fixeth their crudity, so that they may be made good Medicines; and after fixation, yield good and genuine Gold and Silver.

III. Those Metals, Minerals, Stones, and other compact Subjects, not dissolvable by the aforesaid waies, it dissolveth, maturateth, purifieth, and in an hours space exalts Metals, more than the two former Solutions can do in a whole day, whose change into better may be observed in every hour: It dissolveth Metals and Minerals into a penetrating spirituality, so that the Metal is not separated from the *Menstruum*, but a solution is made of both, either by the dry or moist way, from which the more pure part of the Metal, or that which is Gold or Silver, after the premised fixation, is precipitated by Art, especially if many were jointly dissolved. Whence it is sufficiently manifest, that in all the Imperfect Metals Gold and Silver is notably absconded, not discoverable by the vulgar Examen of Cupels: which Operation being

performed by a *Menstruum*, prepared in so gross a manner, it is credible, that if this volatile Hermaphrodite and spiritual Mercury were again fixed, and rendered Corporeal, that it would be by many degrees more subtile, penetrant, and efficacious, for the dissolving, altering, and perfecting of Bodies, than it was before.

This is its Use in general; but specially it abundantly exerts its manifold Virtue; before whose description, it seems not amiss to point out the common Name of this subject, and what the common People think of it. Which, that I may expedite in few words, know, that it is nothing else but the naked salt of the Earth, of which *Salt-Peter* is made. But that every salt of the Earth, or common *Salt-Peter*, hath those Virtues which I here assign to my subject, I shall in no wise say, seeing that it ought to be diversly prepared for divers uses, according to which, thou maist expect divers Virtues.

This subject is necessary to be known by all the Inhabitants of the whole Earth, to all orders and degrees of men, because not to man only, but also to every Creature, it is profitable or noxious, according to its various application.

This subject serveth for *Physicians*, *Chirurgions*, and *Apothecaries*, of which they may prepare excellent Medicines against the natural Diseases of Men. Whence the truth of that common saying of Philosophers is undoubtedly asserted, *viz. That of the greatest Venom the greatest Medicine against Diseases is to be prepared*. And that Nitre is the word of Venoms, I have evinc'd in the second part of my Furnaces, where I preferr it to the *Basilisk* himself; and that from the same Nitre, and its mediation, is to be prepared a most excellent Medicine. In the First Part

of my Mineral Work, for the sake of Physicians, Chirurgions, and others, applying themselves to Physick, I have shewed how by the help of my Alkahest, Medicines are to be prepared from Vegetables, Animals, and Minerals, far exceeding the ordinary waies of Preparation.

But it is not my mind at present to discourse much of Medicines, it may suffice to have shewed what Virtues this Universal subject hath, and to what uses it may be appointed. I say, that it may be profitable to all orders of men, as well to the superiour, as to the inferiour, to spiritual and secular, noble and ignoble, rich and poor: of which orders the Physician is not to be deemed the lowest.

That I may perform my promise, what unheard of things may be done, by the benefit of this subject, in natural diseases incident to man, who is obnoxious to all kind of miseries, I will in the next place reveal somewhat for his health and comfort.

But this my Medicine, which I deliver, is not of great price, but of great Virtue, and of which the poor as well as rich, may be partakers, and (by the blessing of God) may be freed from every curable disease.

The Preparation.

Take two or three pounds of this Menstruum*, whose corrosive nature transmute by force of fire into a nature not corrosive; and you have the* Menstruum *prepared, with which you shall elaborate this Medicine, in this manner: Dissolve in this* Menstruum *as much of the first Ens of Gold (which is to be found in all places of the World, but especially in golden Mines more copiously) as it will attract in the heat; so that a red Solution may be*

made, which digest for some daies, with its own weight of the dissolving Wine; make separation of the pure parts from the impure, by removing the fæces which sever themselves from the Medicine, by falling to the bottom, this being concentrated by an easie heat, will be a red pellucid stone; very like to a soluble salt, which is to be carefully preserved. This Medicine will be second to none, except the stone of Philosophers, and will be of the same goodness, after a Hundred Years, that it was the first day it was made, performing all things which I shew with amazement, for which no mortal man can ever render sufficient Thanks to God.

The Use of this Medicine in general.

This Universal Medicine will cure every natural disease both in young and old, strong and weak, in a very small dose, without any danger, not nauseating the stomach, as the usual Potions do; and is to be taken in any Liquor, according to the Condition of the Sick, as warm Broth or Gruel, Wine, Beer or Ale, Water, Milk, *&c.* from one grain to eight grains, which is the highest dose. It operateth after a diverse manner, according as the strength of the sick, or the nature of the disease requires: if you continue in the Use of the prescribed Doses, the operation will be insensible; it strengtheneth and mundifieth the radical moisture, and in a wonderful manner expelleth every Evil out of the Body being taken daily, every other or every third day: It preserveth from accidental Diseases, correcteth Venom, and resisteth infectious Airs. But if the Dose were greater, the Operation will be more evident, by Sweat, Urine, Spitting, and sometimes by Stool, according as you please, by encreasing or lessening the Dose; and if the disposition of the Disease comply, it is cured by a small quantity of this Medicine, without ocular

observation; but being radicated, requireth a manifest operation, if it refuse to yield to a small Dose acting invisibly; because both in preparing and using this Medicine, regard is to be had, that you neither err in excess or defect, but by observing a *Medium*, you shall obtain both Profit and Honour.

Those of ripe years may take from one to six grains every day, if they have leisure to attend the Cure, but if not, three grains every fourth day, until there remain no foot-steps of the Disease: taking nothing besides this Medicine, and keeping that day from the cold Air, and abstaining three or four hours from Food. In the *Leprosie* and foul Scab, there is no Remedy safer than this Medicine, extirpating the Roots of the Evil without trouble. Nor will you ever be frustrated in the desired effect, if the Sick have strength sufficient to undergo the Cure. [See its Preparation and Use more particularly described, in Part 2. *Phar. Spagyr.*]

After the Description and Use of this Medicine, by which the health of Man may be preserved, and being lost, may be restored, which is far to be preferred to all the Treasures of the whole World. There now follow other Secrets, shewing how by the help of this subject a man may acquire an honest Living; and, as I have said in the Preface, this subject may be provable to all orders of men in the World, whether superiour or inferiour, Ecclesiastical or Political, noble or ignoble, rich or poor, by conferring or admonishing somewhat of good to every one in his Profession. Therefore I will now begin to teach some signal uses of it, that it may be manifest to all men, that this is an Universal subject, which I have alwaies judged such, and that others with me may find it so.

In the first place, all Fossiles or Minerals digged out of the Earth, may be perfectly examined by the mediation of this subject, what metals they contain, how many, and how much of each: It is an infallible Guide to the diggers and melters of Ores, saving them both loss of time and matter. An excellent Artifice, by which the value of all Minerals may be discovered without much labour and charge, being highly necessary for Metallurgists, of *Germany* especially, being quite undone by a continual War, who may in a short time lay up great Stocks or Treasures, to be imployed against the Enemies of their Country in time of necessity: by whose benefit also rich Mines of gold and silver (which otherwise would for ever lie neglected) may be discovered, when they are swiftly and accurately examined.

The Marcasites of Gold and silver being melted by the mediation of this, by a singular compendium, hitherto unknown, do afford more metal than by the common way.

The volatile and immature Marcasites of gold and silver, are fixed in the space of three hours, so that they yield more metal than they could have done without fixation.

Those three things are very necessary and profitable to every Magistrate having Mines in his jurisdiction, by which he may obtain much wealth.

All Gold and Silver which is not purely melted from its Marcasite, is swiftly purged from all additament, the Silver is separated from the Gold, by fusion only, with small labour and cost, but in great weight. Gold and Silver are easily drawn out of old Tin vessels, the tin being preserved almost in the same weight, and being made better than it was before, may serve for the same uses to which it is

wont to be put.

From *Bismuth* much silver is separated, the *Bismuth* being preserved, this secret being agreeable to those places which abound with that Mineral.

From old Copper much Silver may be separated, the Copper remaining unhurt, by which Artifice Countries abounding with this metal, may not a little profit themselves.

Every common silver, may in the space of a few hours be exalted into the nature of Gold, the which if it be done four or five times, which may be in a short space of time, it giveth so much gold, as affordeth a sufficient livelihood, over and above the costs.

Gold may be separated by fusion, from every addition of Copper, Tin, Iron, Lead, Orpiment, Antimony, Arsenick or the like, and be purifyed without Cupels, each being kept apart; profitable for Metallurgists and the like, from the shortness of the time, smallness of the charge and labour, and much gain.

Every imperfect metal without the mixture of other metals, may be ripened by this secret alone in the fire, in the space of an hour, so that it will yield Gold and Silver, but without gain.

There is another very gainful augmentation or increase of the perfect metals, by the imperfect, answering to the Germination or growth of vegetables; for even as every seed being cast into the earth, groweth therein arising to be an herb or a tree, and taketh also its encrease from the same by its inbred attractive power; so is it here also, for *Sol* or *Luna* groweth and encreaseth in *Saturn*, *Jupiter*, *Venus*, or *Mars*, as in their native soil, and are nourished after the manner of herbs, and encrease

from day to day. An Art not to be despised by Philosophers.

By the mediation of this, from all imperfect metals and minerals, yielding nothing by the usual examen of Cupels, Gold and silver is produced in a manifold manner, being an argument that the imperfect metals have somewhat of the perfect reconded in them, when they are inverted and shew themselves to our sight, a work not ingrateful to those who work in Metals.

These are the chief things which I have found may be done in metallick works, by the help of this Subject; yet I make no doubt but there are many more unknown to me, to be revealed to others after me who shall make a good beginning from my writings, the which I also wish from my heart, that the hidden mysteries of the natural wonders of God, may at length be brought to light, for the use of mankind.

Among the enumerated Arcanums, some perhaps may seem of little worth to the Reader; but there are some from which may be had a commodious livelihood, so that an Artist need not be at the will of another, without he please. O how great a thing is Liberty, which no man can worthily esteem, who hath not been a Servant himself. A piece of Bread is sweeter to a quiet, prudent man than many dainties, with care, danger, and noise. It is happy for him who can say with *Paracelsus*, *Alterius non sit, qui suus esse potest*; *Let him not be anothers, who may be his own.* But it is good for him that would use well the Gifts of God, not to be unmindful of his Neighbour, lest temporary Liberty cast him head-long into the Dungeon of eternal Slavery. After shewing this subject to be conducible to all the Inhabitants of the

earth, I have described its use in Metallicks, which is not to be indifferently undertaken by every man, but by those only who are concerned in digging of Mines, and melting and separating of Metals, whether they be noble or ignoble, learned (as well spiritual as secular, exempted from publick offices) or rude, which maintain themselves from Merchandice, or live upon their Estates, all which may receive Fruit from these Secrets, but not Husbandmen, Labourers, Ditchers, *&c.* but that to these also somewhat of profit may proceed from my inventions, I will shew in order; although the principal will redound to ingenious Artificers, Engravers, Painters, Statuaries, those who adorn Glass or Clothes with Silk, Gold, or Silver, and they who make Wax-work.

They who etch upon Copper, may prepare from this subject a good corrosive water, by which (the Copper-plates being first smeared over with a covering fit to defend them, and what Images and lines they please, being drawn upon them with a stile or stift) by a very easie and compendious manner, they will be eroded or eaten into.

Painters, by the help of this, may prepare for themselves most excellent Colours, as *Ultra-Marine*, *Smalt*, fine red or scarlet *Lacca*, *Venice-Ceruse*, and others necessary for their Uses, which otherwise they must have from far, as *Italy*, *Holland*, *France*, *&c.* and at a dear rate.

Engravers and *Statuaries* may so harden their Tools that they may hold their points long, if they be to cut stones.

Embroiderers may put any durable Colour they please upon the silk with which they work.

They who paint Glass, by an easie work, may thence prepare all Colours or Enamels for Glass, so that there will be no need to have them from *Venice*.

They who work in Wax, by the benefit of this, may whiten it exceedingly, and colour it as they please.

Printers may add this subject to their Ink, which will cause it to adhere most firmly to the Paper, and render the Letters very fair.

It is convenient for *Clockmakers* or *Watchmakers*, if a Water be destilled from it, which soldereth Iron or Steel without Fire, if a drop of that *Aqua fortis* be dropped upon it, whence the Iron growing hot, it presently waxeth soft, as if it had been soldered in the fire by the help of Copper.

All *Smiths* may by it harden their Files, and other Iron Tools, as hard as if they had been made of the hardest Steel.

Tin-workers or *Pewterers*, may harden their Tin or Pewter, and give to it an elegant whiteness, so that it will resemble Silver both in colour and sound; neither will it easily tarnish, and by reason of its hardness will endure longer than common Tin or Pewter.

Cabinet-makers may strike an excellent Black upon Pear-tree, Cherry-tree, Box, Walnut-tree, and other hard Woods, which may be used for curious Works instead of Ebony.

Skinners or *Furriers* may dye their Ermins, Fox-skins, Wolf-skins, and the like Furrs, with a Scarlet, Crimson, or deep Black colour, far exceeding the natural.

In like manner, *Feather-dyers* may swiftly give any lasting colour to their Plumes.

Taylors may take out spots or stains out of Woollen, Linen, or Silk Garments, and restore their beauty.

If *Shoomakers* put old Iron to this subject, they may therewith adorn their Leather with an excellent Black.

Weavers may render their Linen threads so fine and soft, that they shall emulate Silk.

Dyers, by this, may give so firm and unchangeable a ground to their Cloth, that the superinduced Colours shall not be corrupted or spoiled by any Wine, Vinegar, Urine, Pickles, Air, or Sun.

Potters may thence prepare a Glassy colour, not unlike to the *Indian Porcellane*, of which Vessels may be made, having the Aspect of Gold, Silver, or Copper, a singular Ornament for Noblemens Tables, hitherto unknown to the World.

Souldiers, *Merchants*, *Travellers*, *Carriers*, and others who are much in the open Air, may of this prepare a Varnish, in which they may dip a Linen Cloth, which will not permit either Air or Water to pass through it, with which they may defend their Boots or Clothes, so that they may travel dry in the Rain.

They who make Tapestry, may restore their faint or faded colours, so that they shall be strong and beautiful.

Mistrisses of Families may prepare of it fine Soap or Washballs, far exceeding that of *Venice*.

Houshold-Maids may with it scowre or cleanse their metallick vessels, so as to render them neat and beautiful.

Women may change the yellow, pale, or brown

colour of their face and hands into a beautiful whiteness.

Old Women may by an easie way take away the wrinkles of their face and hands; as also, the Corns of their feet, and boil their Linen to such a softness, that it shall come but little short of Silk.

Gardeners by this subject may destroy all Insects, by mixing it with Water, and pouring it into those places where they breed, for they will either die in their holes, or run out to die, because they are not able to abide that fire. It also ripeneth Fruits, if a little of this *Menstruum* be applied to the roots, at the entrance of the Spring; and if a large quantity of Apples be covered well over with it, they may thence prepare a lasting Wine, Vinegar, or burning Spirit.

Bakers may use it instead of Ferment or Yeast, if they dissolve a few Hops therein.

Brewers may have very strong Ale or Beer by its help, if they extract their Hops with it.

Mead or Metheglin, as also Beer and Canary, which are upon the turn, and growing sowre, may by this be rendered drinkable.

Comb-makers, and other Horn-workers, may by this soften their Horns, so that they may imprint upon them what Images they please.

Keepers of Armories may preserve their polished Arms or Harness safe from Rust, by anointing it over with this subject.

Bird-Catchers may by help of this prepare such a Birdlime as will not be hurt either by Cold or Heat.

Souldiers by means of this may prepare from Gold a fulminating Powder, of which the magnitude of a

Pease being put upon a red-hot Iron plate will give a greater clap, than half a pound, yea, a whole pound of Gun-powder; the same may also be prepared without Gold, only by the addition of Salt of Tartar and Sulphur; as it is described in the second Part of our Furnaces.

Engineers and *Makers of Fire-works*, may perform many wonderful things by help of this subject.

There may also many new Works, belonging to Weaving and the Smith's Art, be thence made, which may be communicated to neighbouring Countries, whereby Money may be brought in lieu thereof to a Countrey impoverish'd by War.

If *Vine-dressers*, or *Keepers of Vineyards*, pour a little of this subject to the Roots of their Vines, they will have ripe Grapes, and *Must*, or new Wine sooner than their Neighbours; of which they may make a good advantage.

Nevertheless, Must and Wine also may be ripened after another manner, in the Hogshead, without this Art; so that they who understand the way, may have alwaies good Wine, when others have it sowre. A Secret very profitable to cold Climates, which for the most part produce sowre or tart Wines. It is also agreeable to Countries abounding with Wine, when through a want of the heat of the Sun the Grapes do not ripen well; which may be helped by this Art, so that it may be readily sold.

But because the greater part of men, especially of the meaner sort, cannot be perswaded to things which they have never seen nor heard of, I well know, that if I should in plain words describe the reason and manner of meliorating Wines, scarce one man in a Hundred would believe me, but would

rather say, Our fore-Fathers were wise men, and got great Estates by Wine, without the knowledge of this Art, nor did they desire it. If Nature will not ripen our Wines, let them be sowre; yet notwithstanding, if sometimes they will not serve the Master, they may be drank by the Servants.

Men of this sort are incurable, neither are they (being old) easily tamed; and young men take little care how prudently they manage their Affairs. Hence it comes to pass, that Antiquity obtains upon all men. But that the Vine-dresser may see that the present Age is more skilful than the former, I will set before him only one demonstrative Example, by which he may plainly see how much they differ.

Our fore-Fathers knew not how to make any thing of the fæces or dreggs of Wine, but a burning Spirit or Brandy, which being extracted, the remainder they threw away, or sometimes mixed it with the Fodder of Cattel, very rarely dried them in the Sun, and burnt them into Pot-ashes; but by my invention, there may be thence drawn a far greater quantity of burning Spirit, then also a large quantity of Tartar, and at last the Pot-ashes, which is a threefold profit. Which if you manage the matter well, from a Pipe of Lees, you will have at the least seven or eight Urns (*which will be about a Fifth part, an Urn being four Gallons*) of good Wine, from the residue, you will have the burning Spirit, and Tartar, at the last the clavellated Ashes, the profit being four times as much as heretofore, which thing was altogether unknown to our Ancestors. How many Thousand weight of Tartar is every year thrown away in *Franconia*, *Suevia*, *Alsatia*, the *Palatinate*, upon the *Rhine*, *Mosell*, and *Danube*, which would be very profitable to those Countries, if the men were Artists.

But what doth it signifie to teach, if there be none to hear or learn: for it is more adviseable to sit still and do nothing, than to be largely imployed to no purpose. But I am perswaded, that after my death, there will be some who will understand my good will to the World, and search out the truth out of my Writings, to their own great profit. There is an opportunity or season for every thing; Trees first bring forth Budds, then follow Blossoms and Leaves, and last of all, Fruit.

There remains yet another thing very profitable to Country-men; the juice of Apples or Pears being pressed out, by the help of this subject, such an Effervescency (or working) is promoted, as Wines may be thence made, having the relish of the natural, and but little inferiour in durability and strength: and although the beating of the Apples be somewhat tedious, (which is now done much quicker by Mills) that labour is recompensed with a good profit, by the Wine arising from the juice; a Secret very necessary for cold Countries, which cannot ripen Wines, and yet abound much in Apples, but by this way may save much in the price of Wines, for which they usually pay dear.

I have indeed many Arts relating to Wines, but they belong not to this place, my purpose here being to treat of those only, which are administred by my *Universal Menstruum*: Arts (as I think) hitherto known to none, or at least not divulged, that it may be manifest to the Reader what proficiency the World hath made in good things. Whether the matter be credited, or not, signifies little to me, I my self also might have doubted, if I had not learned by experience; but Judgment ought not to be given rashly; we are to know, that God doth wonderfully

dispense his benefits to those who are his Servants, and whom he hath appointed to be his Instruments, to bring his wonders to light.

If Husbandmen moisten their seed with this *Menstruum*, it will sooner be ripe, and have larger, fatter grains than ordinary: Which being done, I will shew by what means they may make great profit of their grain. The grain being whole, not ground, pour to it warm water, impregnated with this *Menstruum*, in a Hogshead well stopped, let it stand and ferment or work for a time, the water will extract all the strength of the grain, the remaining husks serving to feed Hogs: If you ferment Hops with this Liquor, or extract, it will be good Beer: If you will not do this, you may thence draw a very good spirit, the residue, in a short time, will be Vinegar; and if you be wise, you may put this burning Spirit or Wine to many uses, by which you shall have more profit than by selling it; a Secret not to be despised where grain is cheap. I have yet one thing to add among my Wine-Arts, concerning grain, and the Fruits of Trees and Shrubs, which is to be received with thankfulness, as a great Gift of God to Mankind. *Viz.* It is found by industry and manifold experience, that from Rye, Wheat, Oats, Rice, Millet, also from Apples, Pears, Peaches, Cherries, Plumbs, Sloes, Damascens, Quinces, Figgs; as also from Goose-berries, Mulberries, Barberries, Black-berries, Elder-berries, and other-like Fruits of Trees and Shrubs; from all these, I say, may be prepared, with little labour and cost, a Drink very like to Wine, both in taste, smell, and strength, being grateful, wholesome, and durable. For which large bounty, the Inhabitants of cold Climates (which never see Grapes) cannot render to God sufficient Thanks.

There yet remains a manifold use of this subject in Medicine, which if it were rightly described, would make a great Volume, which belongs not to this place, but shall be done more commodiously at another time in a peculiar Treatise. It were to be wished, that this subject were better known, and more used by ingenious Chymists and Apothecaries, that so many dead Herbs and unprofitable Waters might not be set to sale. What, I pray, would it avail, if the whole Mass of Blood being inflamed with an intolerable heat (as happeneth in the Plague and other contagious Fevers) you should wrap the head with a moistened Rose-Cake, comfort the Temples, Pulses, Hands and Feet with Water? think you by this to drive away the Disease? Not at all, but rather render it worse, as Experience hath often witnessed. But it seems to me as if a vaporary Bath or Cauldron were too hot, and one should go and cover the Furnace all over with cold linen, to temper the heat, a thing to be laughed at; but the wood which causeth the flame being taken out, the Furnace cools of its own accord. By a like reason, the malignant Fire of hot Diseases is in the space of a few hours, drawn out from the most inward Penetrals of the Heart, by four grains (at the most) of a good Medicine, where no place is left for external Coolers, or corroborating Epithems. Which thing I have observed not only in one, but in many Experiments; That the Venom being excluded from the Heart, the Body hath returned to its due temper, and by degrees to health and strength.

To what purpose are so many Ointments, Oils, Emplasters, *&c.* when a small quantity of a good Medicine is able to effect more than them all? A whole year is often spent in the curing a small Ulcer or Wound, and then left worse than at the beginning,

the Bridle (according to the Proverb) being applied to the Horses Tail, and not to the original of the Disease. The Fountains of external Ulcers are to be dried within, and not imprudently to be stopped up with outward Plasters, which otherwise, without any outward Remedy, by a small quantity of a good Medicine, may be radically cured in the space of a few weeks. Therefore such a Medicine is to be sought, and all other trifles to be laid aside: But what dost thou, seeing the World will be deceived, and desireth no other? For if any Physician have a good Medicine, which is much easier for the sick to take, than many ingrateful Potions; this is neither esteemed nor rewarded, for if he require a Fee or Reward, he is answered, That he gave only a few grains of powder, two or three times, which cannot be so dear: Hence chusing a certain thing for an uncertain, he requireth his reward according to his visits, and prescribeth Bottles full of Physick, which may be long in taking, and he have the fitter opportunity to encrease their number.

The same thing hath also obtained in Chirurgery, for if an honest Chirurgeon quickly cureth an outward Evil by the help of a good Medicine, he shall not have a due reward, but shall be told, That he hath only applied two or three Plasters, which can be worth but little. Therefore instead of being paid for a quick Cure, he reaps nothing but ingratitude; so that being better taught, it behoveth him to do like others, by employing a month or more about that Cure, which he could perform in three daies.

For this, and the like causes, very few are treated with good Medicines, but Physicians study delaies, after the old manner, if not in respect of the sick, yet at least for their own profit; for if the sick readily

pays his Fees, he, either out of ignorance or voluntary neglect, neglecteth the matter, for which he will have an heavy account to give.

The present World doth only this, he that standeth, let him stand, and he that falleth, let him lie, none regardeth it; every one taketh care of his own matters; nor will he put his hand to the quenching of the fire. That famous Patron of Art, *Alexander* the Great, who bestowed upon his Philosopher *Aristotle* more than a Hundred Thousand Crowns a year, for his Inquiries into Vegetables, Animals, and Minerals, now ceaseth to be. The most wise *Ernestus* Duke of *Bavaria*, and Elector of *Cologne*, What Expence hath he not been at in collecting the Writings of that incomparable *German* Physician and Philosopher, *Paracelsus*, and other such Cherishers and Advancers of Arts, our *Germany* hath lately brought forth? but *Mars* (the Sword) asserting his Empire, hath banished *Jupiter* and *Mercury* (Justice and Arts) so that they play least in sight; but sure it is, that if they be not quickly restored and advanced to their dignity, it will be to the unspeakable detriment of the Country, and to the great advantage of Strangers; *Which God of His Mercy prevent.*

And now the benevolent Reader hath seen, what wonderful and incredible things may be performed by the benefit of this subject; yet I will not deny, but that it may also serve for many more things which I know not, being profitable for all orders of men, superiour and inferiour, learned and illiterate, great and small, according to their several Vocations and States. But some men may say, I do indeed believe that many great things may be done by its means; but because thou dost not together and at once shew the way of preparing the Universal Medicine or

Tincture by its help; there is therefore reason to doubt whether it be the *Universal Secret Menstruum* of the ancient Philosophers, to wit, the *Hermaphrodite Mercury*, so much spoken of by them, every where to be found, a thing contemptible and vile, to be found in every Dunghil, by nature cold and hot, a great Poison, quickly killing and quickly healing, a matter to be found with all men, which the rich and poor equally possess, which *Adam* brought with him out of *Paradise*, and many more Epithets of the Ancients, which are all agreeable to that thing. To this I answer, That in my judgment the Ancients had no other Universal Mercury, to which all their marks do perfectly agree, and may be applied. Do not all men know it, seeing and beholding their own Urine, of which it is generated? Is it not a very vile matter, which we keep not in the House, but throw out of doors, according to the Precept of the Philosophers, to be sought in Dung? Is it not a great Poyson when made into Gun-powder or *Aqua fortis*? and, Have not I shewn that a Universal Medicine may be made of it? Is it not a meer Fire, and also being pure, cold as Ice? and if you will, hath it not equally masculine and feminine gifts? Doth it not so impregnate the imperfect Bodies in the space of a quarter of an hour, that they generate Gold? Is not it self impregnated by the heat of the Fire, that it bringeth forth those Fruits? Is it not highly volatile, and presently firmly fixed? Is it not a Water both moist and dry? a great Corrosive, and yet being rightly prepared, an Enemy to Corrosives? Is it not most heavy and most light? To what thing, except Nitre, doth this Enigma of the Philosophers agree? For, What is blacker than a Crow, whiter than a Swan, more hurtful than a Serpent destroying many, lighter than the Wind, heavier than Gold? Is not this the true devourer of

his own Children (the Metals) the *Azoth* of Philosophers, the Soap of the Wise, the Urine of Boys, Sulphur vive, the Salt of Strangers, the Secret Fire of Philosophers?

Are not all these things in Nitre? But by what method they may be there found, is not my business to shew in this place, let it be sufficient to have pointed out the subject in which they are to be sought and found, which no man before me hath been so kind to do. For further demonstration, to wit, that from Nitre a true *Universal Solvent* (I would not have you imagine it to be *Aqua fortis*) may be prepared, there needeth not. But thou maist contradict it if thou canst, or name another subject in which are all those things. Which I know thou canst not do, if thou could'st at once take a view of the whole World.

That I have not written any thing concerning a Tincture to be prepared of it for the Imperfect Metals, (which defect the ancient Philosophers have supplied) thou maist think that I have not proceeded so far, and that I have wanted time and opportunity to make a farther Progress, nor did I ever aspire to so great things, but have contented my self with those of a meaner Rank. But how far I have penetrated by searching into Nitre, may be seen in the Second Part of my Furnaces, where I have prescribed some notable Processes from a gross subject, of which this is not the least, where I shew, that some years before, I would have melted a Calx of Gold, and because it would not melt, I added by intervals a Fluxing Powder, prepared of Salts, till all flowed well, then the Crucible being taken out of the Fire, and the matter poured out, when I expected Gold, instead of that I found Lead, but the Fluxing Powder

was very red, (although made of the whitest Salts) being tinged with the *Anima* of Gold, the Gold being divested of all its dignity. Which thing, when I had considered, believing some Secret to lie in the matter, I several times repeated the labour, but alwaies in vain: the cause of which errour was not the subject, but my self, who had not observed the weights and degree of Fire; or God, who would not that I should make any farther discovery. Truly, if that Labour had succeeded, I should long since have possessed the Stone of Philosophers, who am now forced to sustain my Family by meaner things with labour. But passing by this, see, I pray you, what the most accurate *Philippus Paracelsus* ascribeth to rude Nitre, when he saith, *Chymistry hath discovered the matter to lie in Nitre*. Let *Basil Valentine*, *Sendivogius*, and the ancient Philosophers, be considered, and you shall see that all their Sayings are accomodated to the operation of this subject, and that I have not attributed too much to it, but rather less than is due. I could, had I a mind so to do, compose all the terms of Philosophers with this subject, but to what purpose so great a prolixity? He that shall once come so far as I am, the Secrets of the Philosophers will be sufficiently manifest to him, and will freely confess, that this is the only true *Universal Solvent*, and that there is no other. Many have alwaies believed this thing to be prepared of Nitre, but because they were not fully confirmed in their minds, they tried nothing with it, and therefore found nothing. Many men in my time have endeavour'd to fix Nitre into a Tincture, but because they took it crude without a due Preparation and fit Associate, such as it was when they committed it to the Fire, such it remained; but if they had known how to have joined an amicable subject with it, perhaps it might have been

more profitable. *Basilius* commandeth to associate it with a brisk and lively female, from whose embraces the Queen might bring forth issue: All the Philosophers say, that to *Mercury* is to be added its own weight of Gold and Silver, (but not the common) and that of both is to be made one indissolvable thing; for while the Gold is dissolved by the Mercury, in the same moment the Mercury is coagulated by the Gold, the solution of the Body, and the coagulation of the Mercury, are done both by the same Work. Certain it is, that there is one thing among Minerals, which is conjoined and fixed with our Nitre, and during the fixation, passeth all colours; but I know not the end of the thing, having never performed that labour, and by reason of my great age, think not to repeat it; nor will I be the adviser of any man, that he should search after an uncertain labour with a certain Loss: but if any man in doing this shall miss his hope, let him not blame me for giving him the occasion by this Writing, who have wrote this only for this end, that I might make it manifest, that the name of *Universal* is not undeservedly assign'd to it: Neither also is there any need, that a thing of so great moment should be made known to an ungrateful World. Any of those things which I have shewn may be done by it, are sufficient for a man to sustain his Family.

Some man may except, and ask, Who hath revealed to thee, that this is the *Mercury of Philosophers*? I answer, That I know it to be such from the properties, form, and nature assigned to it by the Philosophers, which thou also, if thou hadst Philosophick eyes, wouldst acknowledge to be such, which is wont to hide it self from the proud, and to reveal it self to whom it pleaseth God. If a skilful Gardener should happen into a Garden, where he

should see that wonderful Vegetable, *Noli me tangere*, (which at the first was brought from the *East Indies*, therefore planted and cherished with great care and admiration in great mens Gardens) of which he had read so many portentous things, *viz.* That refusing every touch, it would fall to the ground. And although he had never before seen this Herb with his Eyes, would he not certainly apprehend this to be that very Herb? for the Vertues attributed to it argue that it cannot be any other. So he whose eyes it hath pleased God to open, so that he can apprehend all the Properties to be in a subject, which the Philosophers affirm to be in their Universal Mercury, Will he not, acquiescing in that, desist from seeking out another?

Lastly, *Sal Nitre* is the only growth, generation, and encrease of all Vegetables, Animals, and Minerals, as also their Destruction, and Regeneration, by a perpetual Circulation of the Elements, by which things being dissolved, do again return into the same from which they arose: For the Nitre of Vegetables in the bodies of Animals, by the intervening digestions and separations, is generated into a Mineral Salt, which none will deny: and Nitre or Salt of the Earth, is Vegetable, Mineral, and Animal, which cannot be said of any other subject, but the Universal Matter. And even as it is the chief Conserver of Vegetables, Animals, and Minerals, so it is also their Destroyer and Death; therefore by them it is both loved and hated. Vegetables love it, when growing in the Earth, they thence draw their nourishment; for when the Earth is dead, or void of Salt, it affordeth neither nourishment or encrease to feed, Christ himself being witness, when he saith, *Ye are the Salt of the Earth*: but if the Earth be destitute of Salt (or the Salt hath lost his saltness) it is altogether dead, and can bring

forth no Fruit. An ignorant man saith, that Dung maketh the Earth fruitful, but undeservedly, for not the Dung, but the Salt which lies hid in the Dung, doth this, which is generated of Vegetables after their putrefaction, and again transmuted into their seeds and roots which are in the Earth; the same Animals again receive in their food, whereby their bodies are strengthned and preserved from Corruption. For no man is so rude, but he hath learned by experience, that Salt is the Preserver of things both living and dead. But an ignorant man may object, that other things also have a preservative Power, as myrrh, aloes, and other Balsamick Liquors, which preserve Flesh and Fish from putrefaction. To this I answer, That it is not myrrh or aloes, but their salt, which effecteth this. Honey also and sugar preserve things, which are not salts. I answer, That thou understandest not the nature of Salts; those are sweet salts, the other are bitter salts, which by putrefaction are changed into sowre and acid. Also every burning spirit of Wine, and other Vegetables, preserveth other bodies, although they are not in form of salt, nevertheless it is nothing else but the most pure volatile salt of the Wine; mixed with its sulphur, which doth this; for none of the Principles is sincere, and wholly free from the mixture of the rest. Vinegar doth the same thing, and is a meer salt, which if time would permit, I could easily demonstrate. What man's senses are so dull, that he cannot understand one thing to pass into another, by the mediation of putrefaction, to him even great Volumes would profit nothing. From the sweetest Must (or new Wine) Sugar, Honey, by the help of putrefaction and Fermentation alone, is made an acid Tartar, a strong Vinegar, and a volatile burning Spirit; all these will presently return into a

nitrous salt, which few understand, those especially who are believed to know much. Not only Man is delighted with salt, without which he cannot be sound and in health, but also all Animals. Mice, above all, are very greedy of Salt, the which if they find not, they lick the saline efflorescences of Walls, and make a very nitrous Urine. Pigeons also frequent old Walls, which abound with salt. Hens pick out the grains of Oats from Horse-dung, which are full of salt, preferring them to fresh Oats, and thence become more fruitful, in laying more Eggs, the salt concocting the small stones which they swallow, in their Ventricles, is the first matter of Eggshells; but if, being shut up in Pens or Coops, they have not that salt earth, with the small sand or stones, which they usually devour, or their stomachs being weak, doth not digest them, the Eggs they lay afterwards, will be such as we call windy Eggs, having no shells, or such as are very imperfect. Minerals growing in the bowels of the earth (Experience being witness) rejoice in salt, from which they associate to themselves bodies, and make an encrease: In like manner, they love it out of the earth, and by it are ripened and meliorated; amongst which Salts, Nitre, as I have said, is endowed with a singular sympathy towards Metals. On the contrary, Minerals as well as Animals and Vegetables, abhor salt, if they be unduly associated with it, for so they are corrupted and destroyed; for salt being adhibited in a due manner, is the only preserver, augmenter, and perfecter of Vegetables, Animals, and Minerals, which all the Philosophers confess; amongst whom, *Plato* ascribeth to salt something divine, to whom succeeding Ages have assented, seeking many things in salt, yea, even the stone of Philosophers it self; but being ignorant what a true salt was, and of the manner of applying

and preparing it, they could not make any further progress. Hence any man may easily see why the Ancients called those Secrets by the name of *Alchymy*, *viz.* as a certain handling and melting of salt, for which reason also they familiarly used these words; *In Fire and Salt consisteth the Magistery*: Implying, that by the benefit of fire and salt, a true Medicine was to be prepared, as well for the health of men, as for the perfection of Metals.

If God prolong my Life, and grant me opportunity, I will hereafter, for the good of Mankind, openly declare what *Salt* and *Fire* are, that the incredible Vertues of those two bodies, as yet unknown to the World, may be made manifest to all Men. One thing I will add, that the Philosophers pointing out the Universal matter, speak obscurely, when they say, that it is everywhere to be found, that the Poor hath it as well as the Rich, and that no man can live without it, whence many have sought for Air, Rain, Snow in *March*, *May*-dew dreaming the universal matter to be in those, and when their labour hath happily ceased, they have obtained somewhat of a nitrous salt. It is certain, that the Stars do impregnate the Air and Clouds with their Catholick seed, which presently falling in form of Rain, Snow, and Dew, render the Earth fruitful and fit for germination, and that they are again drawn upwards by the warmth of the Air, leaving their Nitre in the earth, to be again impregnated by the stars, and again to descend to conciliate the fertility of the earth, lest the earth at any time should labour under a want of this universal seed, but continually applieth it self to the vegetation of things, and preserveth a perpetual Circulation of the Elements. Hence *Hermes* hath written, that *That which is above is as that which is below*. Yet nevertheless, we need not seek it among

the stars, seeing that it may sufficiently be had, by a far shorter way, at hand, and before our feet. For so much the words of *Hermes* intimate.

The Words of the Secrets of HERMES.

True it is, and remote from every cloak of a Lye, that whatsoever is below, is like to that which is above; by this the wonderful things of the work, of one thing, are acquired and perfected, even as also things are made of one, by the consideration of one, so all things are made of this one by conjunction. Its Father is the Sun, its Mother the Moon, the Wind carrieth it in its belly, the Earth is its Nurse, the Mother of all perfection. Its power is perfect, if it be changed into Earth; the subtile and thin being separated by the fire from the gross and thick, and indeed prudently with moderation and wisdom; this ascendeth from the Earth unto Heaven, and again descendeth from Heaven to the Earth, and receiveth the power and efficacy of the superiours and inferiours. In this manner thou shalt acquire the glory of the whole World; thou shalt drive away all darkness and blindness, for this is a Fortitude excelling all other power and strength, for it is able to penetrate and subdue all things, as well those which are thick and hard, as those which are subtile. In this manner the World was made, and hence its admirable conjunctions and wonderful effects, seeing that this is the way by which those wonderful things are effected, and for this reason I am called by the name of *Hermes Trismegistus*, seeing that I have three parts of the wisdom and philosophy of the whole World. So I conclude my Speech which I have made concerning the *Solar Work*.

These are the words of the most ancient Philosopher *Hermes*, who for his perfect knowledge of Nature, is deservedly stiled *The Father of Philosophers*; in which words he hath sufficiently hinted, That his little Bird without wings (which flying day and night is not wearied) is the Spirit and Life of the superiour and inferiour Elements, the Conserver of the superiour and greater, and of the inferiour and lesser World, and that it lies hid in Nitre: For the better understanding of which, let a man throughly consider the Air, in which the *Universal Spirit*, the first Ens or Being of all things, dwelleth, without which no Animal can live a quarter of an hour, nor any Vegetable or Mineral be produced; neither can the Sun shine, nor the Fire burn. Even as the Excrements of Vegetables, Animals, and Minerals, by a continual Circulation, are transmuted into Elements, the Elements into Excrements, and those again return into Aliments, by an uncessant renovation and transmutation, which Man only doth not attain.

The *Husbandman* knoweth that the Leafs, which every year fall from the Trees, afford a new vigour and nourishment, that the Excrements of Cattel produce very good Grass, that the Fæces or Recrements of Minerals, from which a Metal hath been once separated, is in a short time impregnated by the Stars, that being melted, they again yield the same Metal which they had done a little before: and the *Scoria* of metals are every where returned to their Mines, where in a years time being recruited by the attractive power of the Universal Spirit, they are again impregnated, so that they again by melting afford metal. Doth not the Earth, from which *Salt-Petre* hath been extracted, being exposed to the Air in the interval of some months, yield other *Salt-Petre*,

and this as often as you will, as if nothing had been extracted from it? Doth not all things which are calcined, *viz.* Lime made of Stones, Shells, Woods, Herbs, from which the Fire hath forced the Universal Spirit, by a very strong Appetite or Magnetism, draw the Universal Spirit again afresh, and return into a Corporeal Nitre? Is not the heat and vertue of the sun, the excrement or superfluity of the sun, by which it is nourished and sustained? If heat were nothing to the sun, the Air, by its Nitrous Essence, could never render it weighty, nor cause it to distill in fruitful Rains; nor could the Earth bring forth Fruit, and afford fresh nutriment and food to the sun, its conserver: Whence it followeth, that an Excrement is alwaies the conservation and nourishment of that thing which makes or separates it. But here *Plato* commandeth to rest; at another time (God willing) more shall be spoken. We have heard, that in salt especially in Nitre, although slighted by the unskilful, there are found most potent and profitable vertues, as well for *true Medicine*, as for *Alchymy*. Nor is it reasonable that any man should be offended with its cheapness or low esteem; but he may rather think, that that which is despisable before the World, and imaginary Philosophers, is most precious with God, and those who know the mysteries of Nature. Therefore it remains, that in the nature of things there is not a better subject, by which more and greater wonders may be performed, than *Sal-Nitre*. Therefore, I also constantly affirm, That of it may be prepared the true *Mercury of Philosophers*: but I will not say, that I know the Preparation of the *Stone of Philosophers* from it, because I never went so far: But those things which I have delivered concerning it in the correction of metals, and other good Arts, Experience

alone hath taught me; in which I acquiesce, and all those things, if the matter should require, and it should conduce to a good end; I should not blush to demonstrate singly through their parts, that it may be laid open to all men, that all these things may be performed, but not by every man; seeing that I have not written for that end, that they should be prostituted to all men, for then I should have wrote more fully, but that they might remain in the power and custody of Friends. It can hardly be believed, what great troubles my Writings have created me, while one accosts me from this place with long Letters, willing me to unfold this or that. Others address me with a great Catalogue of Questions, of which, if I should answer the tenth part, I should scarcely have Bread to eat.

If the LORD see good, he will afford me time and occasion of doing yet better things, but if not, let the Reader accept the *will for the deed*: Truly, there are many Sciences of great moment in my Possession, by which I could point out a safe path to Posterity, for the attaining of higher things, but because I have alwaies studied to maintain my Family, with my own honest labour, without detriment to my Neighbour, I am (contrary to my *genius*) prohibited to publish more, being constrained to apply my hands to ancient labours. Some may inferr; If thou hast found out more, act by others, thy hands being suspended from the Work, let it suffice thee to have disposed of thy labours. But he that shall thus say, confesseth himself, not to know the World to be perfidious: If I could have been made partaker of faithful Operators, I should long since have had a free prospect of my affairs.

But it is not at that pass as many believe, men are

now perfidious, keeping no promises, every one seeketh his own, right or wrong; Benefits are rewarded with evil, which hath happened to me more than once; when I have adopted one for a faithful fellow-labourer, the contrary hath happened: For as soon as he hath learned any Secret, believing himself to be more learned than me, hath feigned divers excuses to get away, which if he could not effect openly, and with Consent, he hath attempted it privately; or hath carried himself so petulantly, that I should thank GOD to be freed from him. Whence it came to pass, that I alwaies lost my purpose, perceiving the Proverb to be true, *He that will have his business well done, must be both master and servant.*

But I trust, that in a short time after my death, those who shall, distribute my Laboratory among them, where I have made a stand, will further search out the secrets of Nature, and being lighted by my Torch, will come to the desired end: but it will be much more grateful to me, if my Secrets, which I have found out with great Costs, Labour, and Care, should be known to many, than that they should be intombed with me, without Usury. To which end I will alwaies, according to my power, be a most ready helper and Counsellor, for the sake of Posterity.

THE EXPLICATION OF Miraculum Mundi.

Set forth
In Testimony of the truth of that Matter, and for the Advantage of the Lovers and Followers of *ARTS*.

Reader,

In the first place, before I prove and verifie the powers and vertues of the aforesaid Universal subject, which I have attributed to it, in every point, it will be necessary to make known after what manner the mentioned Salt of the Earth performeth its Operations, that the benevolent Reader may not be confounded, nor imagine that it exerciseth all its Operations in one only manner and way, to wit, crude, as it is of it self; for it doth not so, but it exerteth its power in three manners, forms, or figures, For Example sake*; Its first Use is in many Businesses and Arts, as it is simply drawn from the*

Earth, being purified, and is known to all men. It is applied to another use, being first calcined by fire, and changed and exalted into a more fixed substance. Again, for another use, it is first destilled into a volatile Spirit, and Aqua-fortis. *And so that subject performeth its Operations in Figures, simple, as it is in its self, in form of a Sun;* secondly*, as a fixed fiery Liquor;* thirdly*, in the figure of a volatile spirit, or corrosive* Aqua-fortis*; as shall be demonstrated below, from point to point, in order.*

Point I.

In the first place all Fossiles, by the mediation of this Subject, may be perfectly examined, what Metals they properly contain, how many, and how much of each.

For the verifying and demonstrating this first point, I will begin to shew, that Minerals may be most commodiously proved by the Mediation of the Salt of the Earth, and in what manner this is to be done. First, The Mineral is to be finely powdered, whether it be *Gold*, *Silver*, *Copper*, or *Lead*. To a hundred weight of this, add three or four hundred weight of Calcined or fixed Nitre, [Note, *That the small Say weight is here meant*] mix all very well together, put the mixture into a very strong Pot, which is to be shut with its Cover, set it upon a small foot in such a melting Furnace, as is described in the fourth part of my Furnaces, kindle the fire by degrees, and let the minera, or Ore flow well with its liquor in the Pot, like water, then pour it out into a Vessel fit for this purpose, suffer it to cool, then take out the Regulus; if it be ☉, ☽, ♀, or ♄, weigh it in a Probatory Balance, and you shall find how much ☉, ☽, ♀, or ♄, there is in that Ore. NB. That Iron and Tin cannot be proved in this manner, for ♂ is not fusible in such a

fire, and ♃ is reduced into *Scoria* by Combustion, by reason of the Salt. NB. That if the Regulus of ☉ or ☽ come not pure, or contain any ♀ or ♄, suffer it to run upon a Test or Cupel, with a little ♄, till it sparkle and shine, and you shall have the Metal fine, which is a proof that may securely be trusted, and according to that a Computation may be made, without any fear of fraud or Sophistication; the Regulus of Copper or Lead, need no other trial, but are judged good. NB. That if the Ore be stubborn, and yields no Regulus in the first melting, let the Pot be again set into the Furnace, (if it be yet whole, putting to the Ore, giving no Regulus, a piece or two of Iron) being covered, least the Coals fall into it, suffer it to flow, then the iron entereth into that untameable Sulphur, existing in the Ore, and hindering it from passing into Regulus, and suffereth the Gold, Silver, Copper, or Lead, contained in that Mineral, to fall down, which is to be poured out into a fit vessel, and the Regulus will settle to the bottom, which being cold is to be separated from the Scoria; but if you will prove whether or no the Gold containeth any Silver, or the Silver any Gold or Copper, or the Lead any Silver or Gold, then suffer the Regulus to flow upon a Cupel, till it sparkle with a Splendour, and afterwards make separation by *Aqua fortis*, and you shall find how much of every Metal is permixed with the other. There is no need to describe this separation at large, because it is every where known, and now very perspicuously taught by *Lazarus Erker*, so that it needs no repetition: I have here shewed, and proved, that by the Mediation of Nitre, Minerals may easily and speedily be examined. Therefore, this first Point being now proved and verified, I give thanks to God, who I trust, will further assist me.

Point II.

The Marchasites of Gold and Silver, being melted by the Mediation of this, by a singular Compendium, hitherto unknown, do afford more Metal than by the common way.

That which is contained in this second point is not the least amongst my Lucriferous Secrets, but one of the best, which I have always reserved most secret within my own Breast. Many Men have often allured me with fair Speeches, to demonstrate it, but hitherto I have not been prevailed with to do it, not out of envy, or that my self alone should have that art at command, but because Faith is hardly any where to be found, it is now reputed an honour to promise many things, and perform few, but a disparagement to keep Promises; for I have often learned to my loss, that when through fair Words, and Promises oftentimes more than I required, I have been perswaded to Communicate this, or that Secret; as soon as it hath been out of my hands, I have found the quite contrary, for instead of a Reward, they have either derided me, or began to quarrel and contend, and in this manner, the Benefits which I have confer'd upon them, have been recompensed with great Impiety.

The Process followeth.

Let there be a Furnace built of good Stone, which is able to endure the Fire, small or great, as you please, or according to the necessity and commodity of your Labour, in the following manner. First build an Arch about a Cubit high from the ground, the which cover and make level above with Iron Plates, or Stone that will hold the Fire, which shall be the foot of the Furnace, the length of which ought to

exceed the breadth four times, that is, it ought to be four times as long as broad; by this Arch or foot of the Furnace there is yet another Furnace to be erected, whose bigness within must behalf the breadth of the long Furnace, and about two Cubits high from the wind holes, into which the Wood is to be put, and in that Furnace, on that side which adjoineth to the melting Furnace, is to be a hole, through which the flame of the lighted Wood may strike upon the Hearths of the Furnace; and heat them; above, let there be an Iron Cover, to that end that when the wood is put in, the Furnace may be covered with it, and the flame may be forced to enter by the side into the Melting Furnace, and let the Melting Furnace, the Hearth being now perfect, be divided according to its length, into three Chambers or parts, so that every Chamber be square, that is, as long as broad, and between every Chamber let there be a Wall, with a hole in the lower part, that the flame may pass freely into the second and third Chamber, between which two let there be also the like Partition or Wall, with its hole at bottom, and let the third or last Chamber be close, saving its little door, let it have one only hole, by which the flame may pass out, also on one side of the Furnace, there is to be a hole in every Chamber, by which the Hearths may be discerned, and the Minerals and Metals taken out and put in, but the Chambers are not to exceed a Foot, or a Foot and a half, in heighth; in the upper part of which, let there be a Cover or Cap of good Earth, well luted and accommodated to it in such manner, as whensoever need shall require it may be removed with a pair of Tongues, and put on again. All these things being thus rightly prepared, let a Hearth be made in the first Chamber of good Earth, which can sustain the fire, let the

Earth not be too fat, or too lean, but of a middle condition; in the second let there be a Test made of Argill, or Wood Ashes, but in the third Chamber, let there be a Hearth of good Earth, and in the Name of the Lord, let the fire be kindled in the side Furnace, that the Furnace with its Hearths may be throughly dried. Which being done, let the Ore of ☉ or ☽ being rightly prepared, be put into the last Chamber, that it may be made hot by degrees, and burn, but not melt, which may be hindered by the help of the little door, and the fire may be governed at a beck, according as it shall be necessary, and the Mineral requireth, or shall be able to suffer; the Minerals are sometimes to be stirred and turned well about in all parts, with an Iron Hook or Ladle, that they may be well Calcined. In the first Chamber let there be put so much Lead as the Hearth will hold, and when it moveth well, put upon it, spoonful after spoonful, of the Calcined Mineral in the last Chamber, stirring it with the Lead, and turning it with an Iron Ladle, and let it be so long upon it, till the Lead shall have attracted all the Metal, then the Scoriæ are to be taken out with an Iron Ladle fit for this work, and to be kept by themselves; then again, more of the Calcined Mineral is to be put upon the Lead, and so the melting, turning, and taking out of the Scoriæ, is to be continued as long as there is any of the Mineral at hand, or as much as is sufficient for the Hearth; and if during this labour, the Lead should be impregnated with a sufficient quantity of Gold or Silver, by the Mineral, (which may be perceived by taking a little out in a Spoon, and examining it upon a Cupel) then let Nitre be burned upon it, and let it be repeated two or three times, for so the Lead will be purifyed, grow white, and be rendred ductile, and passeth freely in the Test, without waste, which yet would

not be if it had not been first depurated by Nitre; the Lead into which the Gold and Silver hath passed, is to be taken from the Hearth with a Ladle, and the Hearth made of Ashes, in the middle Chamber is to be filled with it, and the Bellows to be planted against it, to blow the Coals to the other side, and according to the common manner, the Lead is to be deduced into Salt, and the Cake of Gold or Silver is to be taken out, and afterwards to be throughly depurated in good Tests: And so in that Furnace may be performed three Labours, and more of the Gold and Silver is retained then by any other way, for blowing with Bellows wastes and destroys much of a Metal, and reduceth it by burning into Scoriæ, which the sweet flame of wood doth not do; the Scoriæ being taken out, suffer them to pass through a high Furnace, that if there be yet any Lead among them, it may be saved, to be used again in the former Labours, (to wit for attracting Gold and Silver, in the first Chamber, from the Minerals Calcined in the last) in this manner nothing will be lost, and not only more Gold and Silver obtained, but also without so great a charge of Coals as is used in the ordinary way. You should have always two of those Furnaces, or more (if you have a great quantity of the Mineral) in your Elaboratory, that whilst you work in one, the other may be repaired, and when there is need, furnished with new Hearths.

This is the best and most profitable manner of melting the Ores of Gold, Silver, and Lead, containing in themselves Lune, and this without Coals, and strong blowing, but by the flame of wood only. A. the Foot of the Furnace, B. C. D. the three Chambers, E. F. G. the three little doors of the Chambers, by which the Minerals and Metals are put in and taken out, H. the Cover or Cap of the Furnace,

I. the Wind holes, or Registers by which the flame is governed, K. three holes in the Walls, or Partitions of the Chambers, through which the flame passeth, for the heating of the Chambers and Hearths, L. the Furnace on the side, into which is put dry wood, M. the Ash hole, N. its Cover or Stopper, O. the hole in the side, by which the flame is conveyed into the Chambers, P. the Iron Rods, with which the Minerals are turned, whilst they are in torrefying and the Scoriæ are taken away from the Lead, Q. a Spoon or Ladle, by which the torrefied Mineral is put upon the flowing Lead, and the Lead which is impregnated with Gold and Silver, is removed from the first Melting Hearth to the other, R. the Tongs with which the Cakes of Gold and Silver, are taken from the second Hearth, S. the Furnace in which the Cakes of Gold and Silver are perfectly depurated, T. the Tests, V. the Cineritia. NB. That the Works coming from the first Hearth, may also be perfectly finished in the second Chamber, but it is better to do it on Tests fit for this purpose. [*The figure of this Furnace is not printed in the Latin Copy, nor to be found among the other Originals.*] NB. That what concerns this Point, is of greater moment than many will believe, because in our Country, there are found in many places rich Mines, abounding with Gold and Silver, which nevertheless are not rightly depurated by the common way of Melting, so that they afford so little, that it will not pay the charge of the Coals; and therefore it is yet unknown how much good Metal they contain, but it lies hid in obscurity, which nevertheless might be very well perfected in this manner, with great profit. I know Mines of this sort in various places, which I have found very poor, according to the common way of proving, but according to my Method very rich. What Treasures

doth *Hungary*, *Bohemia*, *Carinthia*, *Stiria*, and *Saltsburg* posses in their Regions, unknown to them, and yet after an easie manner to be obtained? What Treasures hath *Misnia*, *Thuringia*, *Brunswick*, and *Fichtelburgh*, hid in them, and do no good? There is no Man of a sound mind, but may easily by labour and observation discern what a great difference there is between the common way of Melting, and mine, if he seriously consider the matter. A Mine of Lead doth not want an exquisite Art of melting, because it is of small price, nor will the loss be great, if some of it be burnt in melting, or remain in the Earth. In like manner the vulgar way of melting Copper, by high Furnaces, and strong blowing, is sufficient. But the Mines of Gold and Silver, are not to be treated so grosly, but after a more subtile and profitable manner, that nothing of them may be lost, but may be of greater use and profit, than hitherto hath been done. For the Mineral of Gold, although it is not in some great Rocky Mountains, yet for the most part, it is found in Flints, and Stones containing Iron, or in any crude Mineral in which ofttimes Antimony, red Sulphur, and Arsenick, is mixed together with the Minera of Gold. As may be seen in *Carinthia* and its Confines. But how should such a Mine, if melted with Coals after the common manner, yield its fruit without loss; for whether it be torrefied, or not, if it be cast upon Coals, and agitated with the strong blast of Bellows, that which is immature flieth away, carrying with it self that which is good; that which remaineth passeth into Scoria. For although it should be mixed with Lead, the Minera of Lead, or Salt of Lead, yet they would not remain conjoin'd, but the Lead is easily melted, floweth, and leaveth the Ore, which by strong blowing is reduced into Scoria, retaining much gold, which so is lost, as well as the

other which flew away in smoak, and at the best but a very little saved, which hath entred the Lead.

NB. But, in my way, it is necessary that the Ore should be broken and subdued, and thereby forced to yield its Gold, if it be well incorporated with the lead, and the volatile is preserved with the fixt; add, that the flame lightly striking or playing upon the matter, destroyeth nothing, and by this way, there is no metal lost. That the thing is so, I will prove by a certain similitude or comparison; make proof in what manner you please, of gold or silver Ore, and observe how much good metal that contains, afterwards prove the same in a great quantity upon Coals, and you shall find much less in that, than in your small proof; when nevertheless the contrary ought to be, because a great fire hath a greater force of acting upon the Ore, than a small one; and this is the only cause, because a great quantity requireth a more violent fire than a small one; which is averse to all crude and volatile Minerals. But by my way, there is found as much, if not more, in a large quantity, as in a small proof. Therefore I will here shew yet by another manner of probation, that by the common and usual way of melting Minerals, all the metal cannot be obtained, and sometimes scarcely half or a third part. To an hundred pounds of the Mineral, reduced into a small powder, add 8, 12, 16, or 18 pound of granulated Lead, or as much as the Mineral shall need, mix the Mineral and the powder of Lead, which with a little Spoon are to be committed to a fiery hot Cupel, placed under a Cineritium or Muffle, give a strong heat, and the Lead will attract all the metal from the Ore, and cast out the Scoria or dross, which will rest upon the moving Lead; which being done, you must have at hand a hot Iron Rod, with which you may move and stir the Scoria every way

well, up and down upon the Lead, to the end, that if any good metal should as yet remain in them, the Lead by that moving may lay hold on it, and catch it to it self; afterwards suffer the Scoria for a little while to heat and burn upon the Lead, that it may flow well; then let the heat of the fire somewhat abate, and the Scoria will become thicker and fit to be drawn out with an Iron rod, which is to be broad at the point, round, and sharp, that the Scoria may be every where clean and wholly drawn away from the Cupel, which are diligently to be kept, that nothing be lost, and lest the future essay should be false. This being done, drive the Lead remaining in the Cupel with an indifferent heat, then there will remain the gold or silver, which that hundred pounds of Ore did contain; that grain or portion is to be taken out and reserved. NB. That whilst you are proving the Mineral, you may also impose another Cupel, of the same magnitude and weight, and as much Lead upon it as was mixed with the mineral, without it, suffer it to flow alone by it self. The grain or portion which comes to be obtained from the mineral upon the other Cupel, will be what that mineral did contain. Afterwards the two Cupels are to be weighed apart, and as much as this, in which the Ore was wrought, shall be heavier than that in which only the Lead flowed, so much of Lead or Copper that hundred weight of Ore did contain; and so much gold or silver as the grain or portion remaining in the Cupel weigheth, and so much Scoria or dross as was removed and drawn out with the Iron Rod.

NB. Some man may object, That the *Scoria* cannot be so accurately and purely removed from the Cupel, but somewhat will be left behind. I answer, That although the removing of the *Scoria* should not be

exactly done, which notwithstanding may be done, if diligence be used, because the *Scoria* to be removed are not pure *Scoria*, but as yet contain somewhat of the Lead, which may be easily as heavy, yea, heavier than the *Scoria* remaining in the Cupel, and which cannot be removed, nevertheless the proof will be just and good. But if by a melting made in a great quantity, you shall find as much ☽ or ☉, ♀ or ♃, (NB. that Iron and Tin cannot be proved in this manner) as the small proof demonstrated, [I think it should be, if you shall not find &c. and the character ♃ should be ♄.] believe that you have not rightly proceeded, and that that which is lost is gone in fume, or by combustion, into *Scoria*. Seeing therefore that this proof is of a great weight, and accordingly is to be made by a great melting Work, I will declare that labour more copiously. *For example sake*, I take two Cupels, accomodated to one and the same form, I weigh them singly, if one be heavier than the other, then with a knife I pare or scrape it a little above or below, so that they may be of equal weight, afterwards I put them side by side conjunctly, or one before, and the other behind, under a Cineritium; when they are duly hot, I put upon one the Mineral, mixed with the granulated Lead, and upon the other, the granulated Lead only; then I suffer them to flow together, seasonably abstracting the *Scoria* from that where the Mineral is; then I cause both to cease. Now supposing that I have added to the Hundred weight of Ore, 1200 pounds of Lead, and also wrought 1200 pounds of Lead in the other Cupel alone, and each Cupel to have weighed three Lothones, according to the weight of the City, and that I find in that Cupel in which the Mineral was wrought, a portion of Gold or Silver, weighing (according to the probatory weight) nine Lothones,

and in the other Cupel, a portion of Silver weighing three Lothones, which the 1200 pounds of Lead yielded: But in regard that I also added to the Mineral 1200 pounds of Lead, which also have yielded three Lothones, which I substract from the nine Lothones, and there remaineth six Lothones of Gold and Silver, which the Hundred weight of Ore hath yielded. NB. If you would know whether the Mineral also containeth Lead and Copper, and how much, then I weigh both the Cupels apart, observing how much that in which the Mineral was wrought is heavier than that in which the Lead was wrought alone, and so much Lead or Copper I may affirm to have been, together with the Gold and Silver, in that Mineral; suppose the Cupel in which the Mineral was wrought to weigh 30 pounds, according to the probatory weight, more than that in which the Lead was agitated alone, then I am sure that there was so much Lead or Copper in that Mineral, together with the gold and silver (for iron and tin do not enter the Cupel, but pass into *Scoria*, but the ☉ and ☽ remain on the Cupel) and the remaining weight, to wit, seventy pounds, I find all in *Scoria*, for a little flieth away in fume: in this manner it may be observed what quantity a hundred pounds of the Ore of Lead or Copper containeth of good Metal, and whether it have any gold or silver or not; according to which a computation may be made, whether it will pay the Charge in a great quantity, or not, and what gain may be had from it. This is a most desirable proof, invented for the use of gold and silver, which are necessarily by this way yielded in great quantity; if it happen otherwise, the errour is to be ascribed to the working; for the Mines of copper and lead, this proof doth not succeed in great quantity, although by it may be certainly known how much of either of them

is contained in an hundred weight of Ore, for both these metals are easily burnt by the fire, and reduced into *Scoria*, which happeneth not to gold and silver, if they be rightly handled; only here it is made appear what quantity of *Saturn* or *Venus* is contained in an hundred pound- of Ore of *Saturn* or *Venus*, which is impossible to extort in great quantity, by the common and known way: for soft and sulphureous metals of this sort lose much, because part is driven away by strong blowing; another part is reduced into *Scoria*: but by my way nothing is lost thus, and but very little remaineth behind. I know yet another way, and that better too, of perfecting the Minerals of gold, silver, copper, and lead, with a certain compendious profit; but seeing that in my *Miraculum Mundi* I have made no mention of a Work of this sort, I shall here say nothing of it. I also know a way of extracting from very poor Copper Mines, all the Copper contained in them, without great labour and cost; which Mines are every where in great quantity to be found, but are not sufficient to pay the Charge of melting in the common way; but this my secret way will yield great profit, for scarcely one pound of Copper will remain behind, and be lost in an hundred pounds of *Scoria*.

Point III.

The volatile and immature Marcasites of Sol *and* Luna *are fixed in the space of three hours, so that they render a double quantity of Metal, to what they could have done before fixation,* &c.

This fixation is a singular secret, in perfecting Antimonial and Arsenical Minerals, which are wholly crude, which commonly yield a little Gold: For when Minerals contain much Antimony, Arsenick, or

Orpiment, and are torrefied in the common way, then the Arsenick or Orpiment destroyeth much of the Gold, carrying it away in fume; but if they be melted without a foregoing torrefaction, then the blowing forceth away more; if from a Mineral of this sort, the yellow or red Sulphur, Arsenick, or other rapacious substances, be diminished or consumed, by closing it in Earthen Vessels, as many do, then by this means the Mineral is burnt, loseth its flux and ingress into Lead, so that much of the gold is destroyed, and reduced into *Scoria*; to prevent which, this following way is the best: With one part of the mineral mix half a part of Nitre, let it be kindled with a Coal, and fixed, then the Nitre burneth away the greatest part of the rapacious sulphur, and fixeth the rest, so that there is but little of the Gold lost, and it keepeth its flux and ingress into Lead; if it be put into the foregoing Furnace, and there wrought, it yieldeth all the gold and silver which it containeth, and nothing is lost. Here some may object, and say, That although in this manner, more gold may be obtained; yet the Nitre maketh the work dear, which I indeed confess to be true, if the Nitre be bought at a dear rate, but if by an artificial Culture, it may alwaies be had at hand, it will cost little, and this torrefaction and fixation, may be perfected with great profit.

Point IV.

All Gold and Silver not purely melted from its Marcasite, may be swiftly purged from every Additament, the silver separated from the Gold, by fusion only, with a small labour and cost, but in great weight.

This way of purifying ☉ and ☽ from all addition quickly, and in an easie manner, is a thing most

profitable, and an Art highly necessary to be known by those who handle metals; for it is sooner done, than by the way of cupellating or blowing off with Lead, but is dearer, by reason of the Nitre; nevertheless, the labour is easie and pleasant, and it is done in this manner: Let a Crucible of impure gold or silver be placed in such a Furnace as is described and depicted in the Fourth Part of our Furnaces, let it be melted, then cast in some Regulus of Antimony, more or less, according to the greater or lesser impurity of the Gold, and according as it hath more or less need of cleansing for its purification. When all shall flow and be clear in the Crucible, cast into the Crucible upon the metal, at several times, about so much Nitre, as there is of addition to the Gold; let it flow, then the Nitre attracteth the Regulus of Antimony, together with the impurity contained in the Gold, which passeth into Scoria. And this Process doth not serve only for impure Sol and Luna, but also for such Sol and Luna which contain Copper, Iron, Lead, Tin, Chalcitis, Aurichalcum, and other metallick and mineral matters, Tin especially, which is difficult to be separated from Sol and Luna by Lead, without loss. But in this manner it may be quickly and easily done. But that my meaning may be the more rightly understood and the less errour be committed in working, I will here institute the Process clearly, and in express words. Suppose to ℔ j. of gold or silver, there be two lothones of Copper, and three lothones of Tin (*a lothone is half an ounce*) which I would separate, and if it be done by the known way of blowing off with Lead, there will need at the least thirty or forty lothones of Lead, and nevertheless one part of the *Sol* or *Luna* will be lost; but by my way to two lothones of Copper, and three lothones of Tin, adjoin five lothones of Regulus of

Antimony, then abstract the Regulus, together with the addition of Copper and Tin, by the mediation of Nitre, which may be done in the Crucible in the space of one hour, which by torrefaction and agitation in the common way, could scarcely have been done in 10 or 12 hours; besides nothing of the Additaments is lost, all remaineth in the Scoria, from which, afterwards, as well the ♃ as the ♀ and Regulus of Antimony may be recovered, to wit, if the Scoria, in which the ♃, ♀, and Regulus of Antimony is, be put into a Crucible, a live Coal cast in, and then the Crucible covered with a tyle, let them flow a quarter of an hour, pour all out, and you shall find in the bottom of the Cone a little Regulus, in which will be the remaining *Sol* or *Luna*, which the Scoria did prey upon; let them be depurated on a Cupel, if they be not already pure enough: The Scoria being again melted, cast in a live Coal, suffer all to flow well together, again there will fall another Regulus from the Copper, the ♃ & ♂ remaineth, and neither by Coals nor any other art, can be brought into Regulus; but if these Scoria be driven through a probatory Furnace, then they also yield the Tin again, and that better than it was before. This Process is not only pleasant, artificial, swift and easie, by which gold and silver is quickly and purely separated from all addition, but there is also hidden in it a great mystery: But because I have only proposed to prove those things to be true and natural, of which I have made mention in my *Miraculum Mundi*, let what I have now said suffice, and what is here desir'd may be found perspicuously and satisfactorily declared in the following Processes.

Point V.

Gold and Silver are easily drawn out of Old Tin or

Pewter Vessels, the Tin being preserved almost in the same weight, and being made better than it was before, may serve for the same uses to which it is wont to be put.

This Process also is very well performed by the mediation of Nitre, *viz.* in this manner. Let the Tin, in which is ☉ or ☽, be reduced into Ashes, even as Lead is wont to be prepared, for the working of Minerals; and let there be mixed with it as much powder of Nitre, let the mixture be put in a strong Pot which will endure the fire, upon which put subliming Pots, let the mixture be kindled in the lower Pot (which is under the Subliming Pots, and must have a little hole in the side for that purpose) with an Iron Rod, red hot, then the Mass beginneth to burn, and sendeth many Flowers into the Subliming Pots, the Tin and Salt-peter remaining in the Pot, take out, and melt in a Crucible, if there be much Lead, then that falleth together with the ☉ and ☽, to the bottom of the Crucible, but the Tin with the Nitre passeth into Scoria, which if the melted Mass be poured out into a Cone, they are Separated from the Regulus of Lead, and after cooling maybe taken out, which Regulus of Lead, by the addition of other Lead, may again be wrought, and in a strong Crucible be reduced into Scoria with Nitre; then there will remain a little Regulus of Lead, which containeth the ☉ and ☽, which was in the ♃. The first and last Scoria may be reduced by a strong blast in a Probatory Furnace, then the Tin will be again obtained, better, harder, and whiter than it was before; the reason is, because the Nitre hath consumed part of the combustible Sulphur, and also separated the Lead. Although this Process is not done with any great profit, yet nevertheless it shews the possibility; but he that knoweth how to handle the matter, will suffer no

loss, for those sublimed Flowers are of greater worth than Salt-peter and Tin, because they may be prepared into a good Medicine; they are also very available in those curious red Colours for Cloth [*Scarlet, or Bowdy*] exalting them in a wonderful manner, and firmly abiding in the Cloth, shining, and giving it a fiery ground.

Point VI.

Much Silver may be separated from Bismuth, the Bismuth preserved, a Secret agreeing to those places which abound with that Mineral.

This Secret is not of so little weight as perhaps it will seem to some; for no Man even to this day hath proved this in the matter it self and with effect, yet seeing that it may easily be done, *viz.* in this manner, melt Chalcitis in a Crucible, and cast upon it successively so much Nitre, until all the Chalcitis shall pass into Scoria, or green Glass, pour out the Mass into a Cone, then the Silver will settle to the bottom in form of a Regulus, which was contained in the Chalcitis, then put the Scoria of the Chalcitis into a Crucible and melt them well for the space of an hour, so all the Chalcites will be revived, rendred Corporeal, and a little will be lost. He therefore that can make the Salt-peter himself, and needs not to buy it at a dear rate, will hence reap great profit, otherwise not; however it proveth that the Salt of the Earth can perform what is here attributed to it.

Point VII.

From old Copper much Silver is separated, the Copper preserved unhurt, by which Artifice Regions abounding with this Metal, may reap no small profit.

That this extraction of Silver from Copper by means of the Salt of the Earth, may be verified, you are to proceed in this manner: Mix with the Copper its own weight of Regulus of Antimony, then melt both together, upon which cast so much Salt-Nitre successively or at times, until it turn the Copper together with the Regulus of Antimony into green Scoria, then make the fire stronger, and cause these Scoria to flow like water, and luit a Regulus, which although it be not sufficiently pure, it may be depurated upon a Cupel with a little Lead, and it yieldeth the Silver which the Copper contained. NB. This process is most true, and will never deceive any Man, but I do not say that he shall obtain Riches by this means, but only prove to be true, what I have ascribed to it in my *Miraculum Mundi*. NB. But he that knoweth how to fix the Scoria, that is the Copper and Regulus of Antimony with Salt, and to melt them into Artificial Stones, or Enamel, so that nothing be lost, he shall be sure not to undergo the Labour in vain; otherwise he may cast in a live Coal upon the Scoria, from which the Silver is separated, when they are in Flux, and let them flow half an hour, then it leaveth the Regulus of Antimony together with the Copper, which the Nitre hath reduced into Scoria, and afterwards another Regulus, to be applied to use, which if all things be well handled, from both, *viz.* from the Regulus of Antimony and Copper, (after their Edulcoration) a green colour for Painting may be extracted, and so the Labours will be compensated, and the gain will be so much the greater.

Point VIII.

Every common Silver may in the space of a few hours be

exalted into the nature of Gold.

This Gradation of Silver is performed by the help of a certain Mineral Sulphur, to wit, of ♂ and Antimony, in this manner. Adjoin to ☽ as much Regulus Martis, and again let it be separated from it by Nitre, which labour is performed in the space of an hour, to the remaining Silver adjoin again as much Regulus, which is again to be abstracted; and let this labour be reiterated five, six, eight, or ten times, which may be done in one day, afterwards let the ☽ be dissolved in Aqua-fortis, then the Gold, which the Nitre by the help of the ☽ hath obtained from the Regulus, will remain in the bottom, which is to be edulcorated, and corporify'd with Borax, the Gold will be good in an excellent degree, but the value thereof is scarce enough to pay for the Regulus, and Nitre. But he that knoweth how to make his own Nitre, or can obtain it without price, may reap a considerable profit: Especially if he know how to transferr the detracted Scoria into further use, which is not here sought, but is only proved that ☽ may be exalted into ☉ by the help of Regulus *Antimonij Martialis*.

Point IX.

Gold may be separated by fusion from every addition of Copper, Tin, Iron, Lead, Orpiment, Antimony, Arsenick, or the like, without Cupels, each being kept apart.

This manner of separating of Metals, from one another, and of depurating ☉ without Cupels, is a most pleasing, fair, and profitable secret, by which in the separation of Metals, much time and expence is saved, and no detriment to be feared, which no man, even to this day could effect, my self excepted: You are to proceed in this manner. First, the mixt Metal,

whether it consist of few or many, is to be granulated, the grains are to be conjoined with a fourth part of powdered Sulphur, somewhat moistened, and to be set on fire in a Crucible luted according to art, which being done, the cover of the Crucible is to be taken off, and the enkindled Metal to be covered with the fourth part of its weight of Antimony. NB. That if there be much ♂pper], or ♃ in the mixture, then the more Antimony is to be adjoined, that it may draw to it self the imperfect Metals. Therefore when the Mass flows with the Antimony, inject a little well purified Nitre, dried and pulverized, and when it flows well, the Mass is to be poured out into a Cone, and the Regulus, if there be any, to be shaken out, which will contain the greatest part of the ☉ which was in that Mass. NB. If there shall be no Regulus, that is a sign that there was not Nitre enough to suffice the crudity, which is to be remedied thus: Return the Mass into the Crucible, and permit it to flow, which being done, throw in as much filings of Iron, as you judge there is Gold in the Mass, and mix it with the Mass with a red hot Iron, cover the Crucible, and give a melting fire for a quarter of an hour, pour it into a Cone, when it is cold separate the Regulus from the Scoria, which will be about the same weight with the filings of Iron, which you used in the precipitation, purifie the Regulus in a small new Crucible, by the injection of Nitre, if it yieldeth Gold without Silver, then it is a sign there is Gold yet in the Mass, therefore it is necessary to flux the Mass again, and precipitate with Iron, if the Regulus be yet golden, then it is to be depurated apart by Nitre, and to be kept; but if it hath more ☽ than ☉, it is a sign that all the Gold is precipitated, afterwards suffer the Mass to flow again, and inject as much filings of Iron,

stirring them well with the Mass, with a red hot iron, permit them to flow well together, then it rendereth as much Regulus of Silver, as there was Iron put in, afterwards also the ♀ will be precipitated, and last of all, the Scoria are again to be fluxed well being mixed with Nitre, that it may appear whether there be yet any Metal in them. The Regulus of ☽ is also depurated in the same manner as the Regulus of ☉: Venus, ♃, and other Additaments, are melted by Bellows, so that nothing is lost. This separation of ☉ and ☽ from the viler Metals, by melting, hath been long sought by many, but found by few. *Lazarus Erker*, in his Writings hath taught by what means ☉ may be separated from ☽ by fusion, but that separation is unlike to this which I have mentioned, because here it is not only shewed how ☉ may be separated from ☽, but also from other Metals.

Point X.

Every imperfect Metal, without the mixture of other Metals, may be ripened by this Secret alone in the fire, in an hours space, so that it will yield Gold and Silver, but without profit; an indication that the viler Metals, may by Art be promoted into the Nature of the perfect, to the great profit of Metallurgists.

This is done only by the power and virtue of Salt Nitre, whereby the Metal is penetrated, depurated, and fixed into a more perfect, or exalted in maturity, but cannot be performed with much profit in a great quantity, but it proveth that Nitre hath a virtue of transmuting every imperfect Metal into perfect, which is done in this manner. Let the Metal be laminated into very thin Plates, whether it be ♀, ♄, or ♃, ♂ is indeed corrected by this way, but melteth not in any Crucible, and ☿ also is transmuted into

other forms, but not into ☉ or ☽. Make in a Crucible *stratum super stratum* with Saw-dust, Sulphur, and Nitre, as also with the laminated Metal, of which mention is made in the second part of Furnaces; kindle the mixture at the top, then a great and suddain flaming fire will arise, by which the laminated metal is penetrated, partly fixed, and amended, so that if it be wrought on a Cupel with Lead, it leaveth some ☽ or ☉, which nevertheless before, would have yielded neither, whence it is manifest, that the flame excited by the Nitre hath corrected the Metal. NB. That ☿ is first to be coagulated, and Chalcitis to be pulverized, before they be commixed with the sudden fire of Nitre, and enkindled. In these Labours, although they may be esteemed of small moment, a great Mistery is hidden, which nevertheless will be valued by no man, although it should be discovered in plain and open words, because the process is mean, costeth little, and may be performed in the space of a quarter of an hour.

Point XI.

Metals also grow up in this subject, in the form of Vegetables, before the eye, in the space of two or three hours, to the length of a Finger, or hands breadth, into many branches and twiggs, without Fruit indeed, but is a demonstration that even Metals themselves do germinate in it like Vegetables.

This Point is mentioned only for this end, to shew that Nitre hath a power of making Metals to grow after the manner of Vegetables. Which thing the Liquor of Flints also performeth, of which mention is made in the Second Part of our Furnaces; but the Liquor of fixed Nitre is better; which is prepared by fixing it

with powder of Coals and Flints, which is also taught in the Second Part of our Furnaces, so that there is no need here to repeat it. If therefore the metals being prepared in little bits, be put into this liquor, they will grow and encrease after the manner of Herbs, and so quickly, that in a few hours space they will grow to the height of a hands breadth, which is very delightful to the eye, and worthy of a singular meditation, whence so sudden an encrease should proceed. Certainly many things might be written concerning this matter, but because in this place I have promised no more, but to verifie what I have attributed to the salt of the earth in my *Miraculum Mundi*; let what is said suffice.

Point XII.

There is another augmentation or encrease of the Perfect Metals, very gainful, by the Imperfect, answering to the germination or growth of Vegetables, &c.

As for this augmentation, it is done by a way far distant from the foregoing, *viz.* in this *Sol* and *Luna* are joined with Lead, Tin, and *Venus*, or with Tin alone, where it is to be left for a convenient time, then the Sol attracteth from the Lead or other imperfect metals, a golden Essence, is encreased and made heavier. The Process is this: Take one lothone (*or half an ounce*) of Gold, eight or ten lothones (*which is four or five ounces*) of Lead, let them be melted together; if you please, you may add Tin or Copper; put the Crucible, together with the Lead or other imperfect metals, into a strong Crucible, give a temperate and constant Fire, that the Lead with the Gold may only flow, but not be white hot; cast into the Crucible upon it half an ounce of the best Nitre, cover the Crucible well, that no Coals fall in, and

keep it in a constant easie fire, then in such a time the Lead, together with the other metals, which were mixed with it, will be turned into Glass, but the Gold being pure, is separated from the Glass by it self, and will adhere to the bottom of the Crucible, which when the Crucible is broken, take out and weigh, and you shall find your Gold encreased, and that it hath taken weight from the other metals. Although this labour affords no profit, yet it sheweth how the nature of metals are to be known. There is yet another way of trying this thing, thus, *viz.* Take half an ounce of Gold, join with it 5 or 6 ounces of Lead, and drive away the Lead again upon a good Test, till the Gold sparkle and shine, and you shall find your Gold to be made much heavier than it was before, which weight it hath drawn from the Lead only.

Point XIII.

By the mediation of this from all Imperfect Metals and Minerals, yielding nothing in the usual Examen of Cupels, Gold and Silver is produced in a manifold manner, being an Argument that the Imperfect Metals have somewhat of the Perfect reconded in them, when they are inverted, and shew themselves to our sight.

If we would obtain Gold and Silver from the Imperfect Metals, by the help of Nitre, an equal weight of Regulus of Antimony is to be added to them, that they may be rendred frangible, and fit to be pulverized, so that they may be commixed and fixed with Nitre in this manner: Take an ounce, or an ounce and a half of Copper, Lead, Tin, or Chalcitis, melt it with as much Regulus of Antimony; pulverize the mixture, and mix with it its equal weight of the best Nitre, put the mixture into a crucible, kindle it with a live coal, then the mixture will be reduced by

the Nitre into Scoria, which must be melted by a very strong fire, in a Wind Furnace, then the Metal will pass into a Regulus, but the Regulus will remain in the Scoria, which by the casting in of a live coal may be precipitated and brought to Regulus again: but weigh the metallick Regulus according to the Hundred weight, and drive it (if it be Lead) upon a Test, then you shall find it to contain gold and silver, which the metal had not before. If the metal be Copper or Chalcitis, a due proportion of Lead is to be added to it, that it may be wrought upon a cupel, then it leaveth gold and silver, which without this Operation it would not have done. This Work may also be effected by another way, *viz.* Mix ♄ or ♀ with its own weight of Regulus of Antimony, suffer it to flow well with the metal in a melting Furnace, inject successively by a little at a time, so much Nitre as both the Metal and the Regulus did weigh, then let the Regulus and the Metal be fired by the Nitre, that some of the superfluous sulphur may be burnt and the mixture reduced to *Scoria*, afterwards give a strong fire, that the Scoria may be well melted, then the Metal will be separated from the Regulus, which may be tested, and the correction of the metal, made by the benefit of the Nitre, will be manifest.

As for these 13 Metallick Labours, they are in themselves very good, and profitable to be known by every one handling Metals, some of which, if they be accurately manag'd, and by a skilful Artist, will afford great Gain, and they are all done by the help of the Salt of the Earth. But I will not deny, but that those Labours may also be performed by another way, which needeth no Nitre. But I do not now intend to say any thing of that, but only to prove that all those Secrets and Transmutations may be effectually performed by the contemptible salt of the

Earth.

In Mechanicks.

Point I.

They who Engrave or Etch upon Copper, may of this subject prepare a good corrosive Water, by which (the Copper Plates being first smeared over with a Covering fit to defend them, and what Images or Lines they please, drawn upon them, with a stile or stift) by an easie and compendious manner, they will be eroded or eaten, which otherwise would require a long time to be engraven.

That a corrosive and graduating *Aqua-fortis* may be prepared of Nitre by destillation, needs no proof, the way of making it being every where known, as a thing common, only here it is proved, that this shortening of the Engraver's Work may be performed by the Salt of the Earth.

Point II.

Painters by the help of this, may prepare for themselves most excellent Colours, as Ultra-Marine*, blue Smalt, fine red or Scarlet* Lacca*,* Venice *Ceruse, and others necessary for their Uses, which otherwise they must have from far, as* Italy*,* Holland*,* France*, &c. and at a dear rate.*

That excellent colours for Painting, may be made by the salt of the Earth, I will thus prove: Blue Smalt is otherwise prepared of flowing Sand, Chalcitis, and Potters-ashes: But if instead of those ashes, you take the fixed salt of the Earth, the smalt will not be only rendred more open, loose, and fine, but also purer,

by reason the salt of the earth is purer than those ashes. *Lacca* for the most part is made of Flocks shorn from crimson or scarlet cloth in the dressing, and by a singular *lixivium* (instead of which Nitre may be taken) the colour is extracted, which is to be precipitated, edulcorated, and dryed upon clean Boards in the sun, or by a stove. Verdigrease and Ceruse are commonly prepared by the help of Vinegar, in Iron Vessels put in Horse-dung; but if the Copper or Lead be dissolved in spirit of Nitre, and the Copper precipitated by a *lixivium* of salt of Tartar, but the Lead by salt water, then edulcorated and dried, the Copper will exhibit a green colour, which may be used in all Paintings, and will not corrode and destroy other colours, as the common Verdigrease is wont to do: And the Ceruse is rendered more delicate white, and pure than that which is prepared by Vinegar, with which oftentimes much Chalk is mixed to augment it, and is not so conducible to Painting, nor to the shops, as that which is made *per se*, without any mixture.

Point III.

Engravers and Statuaries may so harden their Tools, that they may hold their points long, if they be to cut stones.

That Iron may be hardened by Cementation with Salts, so that it may serve instead of Steel, is now openly known; but the iron or steel is to be kept in cementation as long as need shall be, not with common salt alone, but mixed with the powder of coals and salt of ashes; then the Iron grows as hard as steel, but steel is rendered harder than it was before.

Point IV.

Embroiderers may put any durable Colour they please upon the Silk with which they work.

It may be known, that Nitre, as being a depurated salt, will easily induce colours, and constantly preserve them, yea, exalt them, which many know, they especially who dye cloth with rich grain colours, as Scarlet, Crimson, *&c.* when they add the spirit of Nitre in the boiling, to aluminate it, (as the Dyers call it) the colour is wonderfully exalted, and made much more fiery, so that it may be sold dearer than common Crimson or Scarlet. This spirit of Nitre also tingeth Ashes, Nails, or Hoofs, Quills, or Feathers, with a golden colour, but if the Nitre be fixed by calcination, then it also equally exalteth, but not into a red, but a Purple; Dyers use Potters ashes for these Works, but fixed Niter is much purer, and rendereth the Work more beautiful than those impure ashes.

Point V.

They who Paint Glass, by an easie Work, may thence prepare all Colours or Enamels for Glass, so that there will be no need to have them from Venice.

The Painters of Glass sometimes complain, that their fusory Glass or Enamel will not readily flow, and that the Glass which they are to colour is melted first; the Salt of the Earth being fixed, remedieth this, if the colouring Glass be mixed with it in a due proportion, and again melted, for by this means they will be rendered fluxible at pleasure.

Point VI.

They who work in Wax, by the benefit of this, may

whiten it exceedingly; and colour it as they please.

That Salts with Water do whiten yellow Wax, being melted thin, and exposed to the Air, and often sprinkled with the Salt Water, is sufficiently known, and wants no proof but not better than salt-Nitre it self.

Point VII.

Printers also may add this subject to their Ink, which will cause it to adhere very firmly to the Paper, and render the Letters very fair.

That fixed Salts will readily conjoin Ink with Water, is not unknown, and none better than fixed Nitre, which also excelleth all sharp *lixiviums*, having a power of cleansing Lead, Tin, Copper, or other Vessels.

Point VIII.

It is convenient for Clock-makers, or Watch-makers, if a Water be destilled from it, which soldereth Iron or Steel, without fire, if a drop of that Aqua-fortis *be dropped upon it, whence the Iron growing hot, it presently waxeth soft, as if it had been soldered in the fire by the help of Copper.*

If an *Aqua-fortis* be destilled from Niter and calcined Vitriol (NB. that there must be no Water or Phlegm in the Spirit) and two little pieces of Iron be melted with it, (between which there must be little Filings of Iron) then the Iron groweth hot by the *Aqua-fortis*, which acteth upon it, and the one will be joined to the other by melting, as if it had been done by the fire. But he that will use that water, must know how to prepare it himself, because such is no where to be

found to sell.

Point IX.

All Smiths may by it harden their Files, and other Iron Tools, as durable, as if they had been made of the hardest Steel.

Fixed Salts being mixed with ashes and powder of coals or sand, after that they have remained 24 hours in a close Fire, do harden iron like steel; as is proved before in the third point.

Point X.

Pewterers may harden their Tin or Pewter, and give to it an elegant whiteness, so that it will resemble Silver both in colour and sound; neither will it easily tarnish, and by reason of its hardness, will last longer than common Pewter.

If Tin be often melted, and extinguished in a *lixivium* of fixt Nitre, it is made harder than it was before; but if it be put to Nitre in Flux, and suffered to melt in it; then also it will be more hard. NB. But if the Tin be reduced into Scoria by Nitre, and the Scoria again reduced, it will be rendered harder and fairer, than by the two former ways.

Point XI, XII, XIII.

Cabinet-makers may strike an excellent Black upon Pear-tree, Cherry-tree, Box, Walnut-tree, and other hard Woods, which may be used for curious Works instead of Ebony. Skinners or Furriers may dye their Ermins, Fox-skins, Wolf-skins, and the like Furs, with a scarlet, crimson, or deep black colour, far exceeding the natural. In like manner Feather-dyers may swiftly

give any lasting colour to their Plumes.

If an *Aqua-fortis* be destilled from Nitre and Vitriol, and a little silver dissolved in it, and Rain water poured thereon (for the weakening of the *Aqua-fortis*) then not only all hard Woods, are blacked by it, so that they represent Ebony, but also skins and feathers are made black as a coal, a ground being first laid upon the feathers, skins, or woods, that the Colours may remain and endure firm. Therefore the 11, 12, and 13 points are thus verified together.

Point XIV.

Taylors may take out Spots or Stains, out of Woolen, Linen, or silk Garments, and restore their Beauty.

Of fixed Nitre is made a Soap, so subtile and pure, that by it all Spots may be taken out of Garments.

Point XV.

If Shoemakers put old Iron to this subject, they may therewith adorn their Leather with an excellent Black.

If Nitre be dissolv'd in Vinegar, and old Iron lie some time in it, it will make an Ink with which Hides may be blacked with an excellent Black. But there is no need of Nitre for this use, for if Iron be put to Aqua Calcis, it effecteth the same thing; only mention is made of this in *Miraculum Mundi*, that it might be manifest, that this Universal Subject may be of use, to all and singular Artificers.

Point XVI.

Weavers may render their Linen Threds so fine and soft, that they will emulate silk.

All Men know that the boiling of Thread in a strong

Lixivium renders it soft and delicate, but seeing that fixed Nitre is better than a strong Lixivium, it will also perform this work better than any common Lixivium.

Point XVII.

Dyers by this may give so firm and unchangeable a ground, to their Cloth, that the superinduced Colours shall not be corrupted, or spoiled by any Wine, Vinegar, Urine, Pickles, Air, or Sun.

If the Spirit of Nitre be put into the first boiling with the Alum and Tartar, for the aluminating the Cloths, it will give a permanent ground, as is already proved in the fourth point.

Point XVIII.

Potters may thence prepare a Glassy Colour, not unlike to the Indian Porcellane*, of which Vessels may be made having the aspect of Gold, Silver, or Copper, a singular Ornament for Noblemens Tables, hitherto unknown to the World.*

The Glasing of Earthen Vessels, that they may appear like a natural Metal, is an egregious art, but it doth not always succeed, for the Colours are easily burnt and destroyed by too much heat, so that no Metallick Vitrification can be discerned. Vessels therefore, ought to be glased not in a common Potters Furnace, but in a peculiar Furnace, that the fire may be oftner observed. If the Vitrification be to represent Gold, or Silver, or Copper, then Gold, and Silver, and Copper is also to be taken in this manner: Take one part of Gold and Silver, or Copper, Regulus of Antimony two or four parts, melt the Regulus and the Metal, pulverise them in an Iron Mortar, and mix them with

an equal portion of Nitre, suffer the mixture to be fixed in a Crucible, with which mixture the earthen vessel is to be rubbed over or gilded, afterwards to be committed to a Furnace fit for this purpose; if you proceed right, you will obtain a very beautiful Vitrification, as if the Vessel was gilt with Gold, Silver, or Copper, which will not vanish or decay, and will far exceed in beauty and splendour the Vessels which are gilt with those Metals, for those in process of time lose their splendour, but these do not as long as the least bit remains.

Point XIX, *and* XX.

Souldiers, Merchants, Travellers, Carriers, Fishermen, and others, who are much in the open Air, may of this prepare a Varnish in which they may dip linen Cloth, which will not permit either Air or Water to pass through it, with which they may defend their Boots or Cloths, so that they may travel dry in the rain. They who make Tapestry, may restore their faint and faded Colours, so that they shall be strong and beautiful.

Here mention is made of a certain mixture in which if Linen Cloth be dipped and dryed will not permit water to pass through, and it is done in this manner. There is nothing wanting in Linseed Oyl, but that the humidity be taken from it, which always hindereth its dying; now to effect that, there is no better way, than to boil the Linseed Oyl gently and gradually with the Flowers of *Lapis Calaminaris* or Saturn, (which are sublimed by Nitre) so long till the Oyl be tenacious, and groweth hard enough for this use. NB. That a Linen Cloth immersed in this mixture, and shining Talk being finely laid upon it, may be coloured of any colour, which will very strongly adhere to it, and may serve for the making of

Tapestry. Therefore in this manner the nineteenth and twentieth Points are confirmed.

Point XXI, *and* XXII.

Mistresses of Families, may of it prepare fine Soap or Wash:balls, far exceeding the Venetian. *Houshold Maids, may with it scour their Metalline Vessels, so as to render them neat and beautiful.*

That fixed Nitre will wash and purifie Linen cloth beyond all Soap, no Man will deny, who comprehendeth the matter, concerning which thing, the Ancients have written much, and not in vain, calling Nitre the Soap of the wise, but not for the washing of Womens Linen, but for the intrinsecal purifying of the imperfect Metals: Their External Purgation may also be performed by help thereof, so that the twenty second Point is also verified.

Point XXIII.

Women may change the Yellow, Pale, or Brown Colour of their Face, and hands, into a beautiful whiteness.

That an Egregious Cosmetick may be made of Nitre, calcined with white Talk (by which ill coloured skins may be whitened) is not to be doubted. For if Nitre fixed by the Regulus of Antimony alone, performeth that, why should it not yet do it better, if it be conjoined with some white Mineral Talk in the Calcination?

Point XXIV.

Old Women may by an easie way, take away the Wrinkles of their Face and Hands, as also the Corns of their Feet, and boil their Linen to such a softness,

that it shall come but little short of Silk.

It is easie to verifie this, to wit if Nitre be fixed with Regulus of Antimony, and set in a moist Cellar to run into an Oyl, which Liquor will be so fiery, that if any hard Skin, or Corn, be often anointed with it, it will so soften it, that it may be cut away with a Pen knife, and afterwards other smooth and soft Skin will grow in its room.

Point XXV.

Gardeners by this subject may destroy all Insects, by mixing it with water, and pouring it into those places where they breed, for they will either die in their holes, or run out to die, because they are not able to abide that fire. It also ripeneth Fruits, if a little of this Menstruum be applied to their Roots, at the entrance of the Spring; and if a large quantity of Apples be well covered over with it, they may thence prepare a lasting Wine, Vinegar, or burning Spirit.

It is not to be doubted, but that fixed Nitre will kill all Worms in the Earth; I have often tried it with good advantage, and found it true, in this manner: Many years ago, I had a Garden, in which was a Bed of Asparagus, which I covered all over in the Winter with Horse-dung, to defend it from the Frost, which occasioned the breeding of many small Worms like Threads, sticking to the Roots of the Asparagus, so that they could by no means grow or increase, only by reason of the great quantity of Worms, which took away the nutriment of the Vegetable for themselves. And once by chance throwing some fixed Nitre exposed to the Air, and turned into a Liquor, out at a Window into the Garden, it fell upon that place where these Worms were, the fixed Nitre was dissolved by the following Rain, and penetrated the

earth; which done, the Worms in great numbers crept out of the earth, because they could not abide that fiery Liquor, the Asparagus grew up in the same place more plentifully and perfectly than before, which moved me also to apply this Liquor in other places; by this means the whole Garden was in a very short time freed from Worms.

Point XXVI.

Bakers may use it in stead of Ferment or Yeast, if they dissolve a few hops therein.

If pure Nitre with flower be throughly moistened with warm water and set in a warm place, then, by its own proper power and virtue, it beginneth to ferment, especially if some fresh Hops be put to the water, by which also other things are promoted to fermentation.

Point XXVII.

Brewers by its help may have very strong Beer, if they extract their Hops therewith.

In the like manner also warm Beer may be excited to fermentation.

Point XXVIII.

Mead, and Metheglin, as also Beer, and Canary wine, which are upon the turn, and growing sowre, may by this be rendred drinkable.

Any kind of Drink, whether it be Canary, Metheglin, or Beer, which easily sowre in Summer, if you would amend them, to a Tun of the Liquor put about two or three Ounces of fixed Nitre put up in a Linen Rag into the Bung-hole at the top of the Cask, and let it

hang down into the Liquor, then in a short time the sowre Liquor will be rendered drinkable.

Point XXIX.

Comb-makers, and others who work in Horn, may by this so soften their Horns, that they may imprint upon them what Images they please.

That every Horn, or Bone may be softened, if it be sufficiently boiled in a Lixivium of Nitre, may easily be apprehended; which thing another strong Lixivium, not so fiery as that of Nitre, will also perform.

Point XXX.

Keepers of Armories may preserve their polished Arms, or Harness free from rust, by anointing them over with this Subject.

It is credible, that fixed Nitre will preserve Iron from Rust, seeing that it is equally contrary to Corrosives, with a simple Aqua-Calcis which performeth the same.

Point XXXI.

Bird-catchers, may by the help of this prepare such a Birdlime, as will not be altered by Cold or Heat.

If a Spirit be distill'd from Nitre, and Lapis Calaminaris dissolved in it, and the Spirit again drawn off, there will remain a thick and heavy Oyl, with which the Glue for Wood being throughly humected and dissolved, it becometh tenacious and viscous, which will not be dried by the heat of the Sun, but keepeth its unctuosity in all Seasons. N. B. That Spirit of Salt, or Vitriol, also performeth the

same thing, if any Glue be dissolved therein.

Point XXXII.

Souldiers may by help of this prepare a fulminating powder from Gold, of which the magnitude of a Pea, put upon a red hot Iron Plate, will give a greater Clap, than half a pound, yea a whole pound of Gun-powder; the same may also be prepared without Gold, by the addition of Salt of Tartar and Sulphur, as it is described in the second part of Furnaces.

As for this point, it needeth no proof; for it is sufficiently known, that of ☉ dissolved in Spirit of Nitre (in which also was dissolved Sal Armoniack) and precipitated with Salt of Tartar (or Spirit of Urine, which is better) then edulcorated and dryed, such a powder will be made, which being put upon an Iron, Copper, or Silver Plate, and enkindled by a light heat, fulminateth more strongly than half a pound of common Gun-powder, concerning which, I have treated at large in other of my Writings.

Point XXXIII.

Engineers, and makers of Fire-works, may perform many wonderful things, by the help of this Subject.

That common Nitre is used in the making of Gun-powder, and other Fire-works, wants no Testimony, being a thing every where known.

Point XXXIV.

Many new Works belonging to the Weavers, and Smiths Art, may be made thence, which may be Communicated to Neighbouring Countries, in lieu of which, money may be brought into a Country

impoverished by War.

As for this point, it is most certain, that by the mentioned Subject, various Manufactures may be perfected, which thing let no Man doubt; but there is no need here to particularize; let it suffice that I have verified (by the assistance of God) those things which I have named, and proposed to explain in that place.

Point XXXV.

If Keepers of Vineyards, pour a little of this Subject to the Roots of their Vines, they will have ripe Grapes, and new Wine sooner than the rest of their Neighbours, of which they may make a good advantage.

Plebeians, Country-men, Gardeners, Vine-dressers, and the like, who are conversant about the propagation of Vegetables; do say, and believe, that Dung causeth Fertility, and the increase of things: But a Philosopher, penetrating farther into Nature, and who is a most diligent Searcher of her Works, attributeth that to the Salt which is hidden in the Dung, and the matter it self is no otherwise, for by digestion in the Stomachs of Men and Bruits, the essential Salt, as well of Animals, as of Vegetables, is transmuted into a Nitrous Salt, which together with the Excrements passeth out by the Belly, and is used by Men for the propogating of Vegetables of all kinds, but another Salt which doth not participate with that, is separated by another way, to wit, by Urine, the greatest part of which Salt is acid, and contrary to the growth of all Vegetables, (although it carrieth along with it some volatile Salt) it destroyeth, mortifieth, and taketh away from them

the power of growing, yea, Life it self, if they be often moistened with it; but the Nitrous Salt reconded in Excrements, on the contrary, vivifieth all Vegetables, and maketh them to encrease, grow strong, and bear Fruit, which all men know. Therefore if it be probable that it is not the Dung, but the Salt which is hidden in the Dung, that causeth fertility and encrease, it will be possible, that an encrease by such a Salt may be procured in all Vegetables equally as with Dung it self, and indeed better, for there is Urine also conjoined with the Dung; which if it be not for some time exposed to the Air and the Rain, for the washing away that sharp Salt, the Dung would avail nothing to the fattening of the Earth, which Country-men know, and therefore they do not presently use their fresh Dung, but lay it in the Fields before Winter; Vine-dressers in their Vineyards; and leave it there all the Winter, to that end, that the Rain may wash out that sharp and hurtful Salt; and this being done, then at length they mix it with their Earth; and the event teacheth them that this fattens more than Dung carried fresh out of Stables, and full of Urine. Therefore if I know how to make a Nitrous Salt, which is reconded not only in the Excrements of Men and Brutes, but also in Rainwater and common Earth, I may use this instead of Dung, (being first purged from its contrary acid) one pound of which will perform more than an hundred weight of Dung; yet in the mean time it conduceth to that purpose, if a little Sheeps-dung be dissolved together with the purified Nitre, in Water, with which the Roots of the Trees are to be moistened or Seeds throughly wetted with the same. And this I have proved more than once, and found, that by the help of Nitre well depurated, an encrease is most powerfully and swiftly promoted, yea, more

than can be believed. NB. That I would have none understand me, as if common Nitre were to be taken, which is not at all profitable in these matters.

Point XXXVI.

Nevertheless Must and Wine may be ripened after another manner in the Hogshead, without this Art, so that they who understand the way may have alwaies good Wine, when others have it sowre, &c.

This is a very fair and profitable Secret in those places, where Wines, by reason of cold, cannot come to maturity, but are forced to remain crude and impotent, which by this Remedy may be brought to maturity in the Hogshead; so that Wine which is eager and sowre, may be made delicate, friendly, generous, and durable. And although I here write nothing but the truth, and what I have often effectually proved, yet I very well know, that but a very few will apprehend or believe it, which matters little to me; I am satisfied, that I have verified what I have written in this point.

Point XXXVII.

There remains yet another thing very profitable to Countrymen. The juice of Apples or Pears being pressed out, by the help of this subject, such an effervescency or working is promoted, as Wine may be thence made, having the relish of the natural, and but little inferiour in durability and strength, &c.

In this point mention is made how the juice of Apples, and Pears, may be corrected, that it may be like to Wine, keeping many years uncorrupted: which certainly is a Secret of great moment and profit. Apples, when ripe, of their own accord fall from the

Trees, every thing hath its period; what advantage may be made by this Art in those places, where a great quantity of Fruit groweth; whether is it not better to make this use of them, than to leave them to rot and be lost? I will do what lies in me, and not bury my Talent, that I may be rendered excusable before GOD and the World, although that which I teach may not be received, as becometh it to be used. At length, after my Decease, it will be observed, what is hidden in my Writings, but the *Phrygians* were wise too late. Therefore I again affirm, that all things contained in this point, are purely true, and may be perfectly effected. [*See Apology against* Farnner.]

Point XXXVIII.

If Husband-men moisten their Seed with this Menstruum*, it will sooner be ripe, and have larger and fatter Grains than ordinary: which being done, I will shew by what means they may make great profit of their Grain,* &c.

The 35 Point confirms the truth of this, That Grain will grow the more plenteously, if it shall be humected with the Nitrous Water above-mentioned, before it be sown, but common Nitre is not here to be understood. The other is also consentaneous to Truth, which is written about the most profitable use of Grain, which none need doubt; for as yet more may be done in that than I have here spoken of, for without much labour and cost, by that water, every good and kernelly substance, as I may so speak, of Grain, is extracted, which Extract may be kept for many years, as a Treasure of great moment, of which afterwards, at any time or place, (by the addition of Water of Hops) good Beer may be made, and

Vinegar, and burning Spirit; it is also of such a very Nutritive substance, that in case of necessity it may be used instead of Bread, one pound of which will afford more nourishment than two or three pound of Bread made after the common manner. It may also be kept in Garrisons with great commodity: Also it may be used at Sea, by those who sail to the *Indies*, and trade about in Ships, when they want Bread; of which by the addition of warm water of Hops, may be made very good Beer, at any time of the year, for it is easily and wholly dissolved in warm water. For this reason also it may be most commodiously carried from place to place by Armies in time of War, which in the Field, at any time, Winter or Summer, with the water of Hops, it may be boiled into Beer, and there is no need to carry the water far, because it is to be found in all places; neither are Hops of any great burden; therefore in one only Tun there may be carried of this Extract as much as sufficeth for the brewing of six or eight Tun of Beer; and which is more, by this means, wholesome Beer may be made in the *Dog-daies*, as well in Camps, as in Cities and Ships, without any fear of impediment or future sowrness; at which time good Beer is not otherwise made, because then it is wont presently to grow sowre; and many other Commodities are procured by this means, all which to declare, would be superfluous. Let what hath been said suffice.

Point XXXIX.

I have yet one thing to add among my Wine-Arts, concerning Grain, and the Fruits of Trees and Shrubs, which is to be received with Thankfulness, as a great Gift of God to Mankind, viz. *It is found by industry and manifold experience, that from Rie, Wheat, Oats, Rice, Millet; also from Apples, Pears, Peaches,*

Cherries, Plumbs, Sloes, Damscens, Quinces, Figgs; as also from Goose-berries, Mulberries, Barberries, Black-berries, Elder-berries, and other like Fruits of Trees and Shrubs; from all these, I say, may be prepared with little labour and cost, a Drink very like to Wine, both in taste, smell, and strength, being grateful, wholesome, and durable, &c.

In this point mention is made, That of the Fruit of Trees and other Bushes and Shrubs, a clear Drink may be made, which is also grateful and durable, being like to Wine in taste, colour, and virtue; which thing, although it may seem strange to those who are ignorant of the matter, nevertheless it is most true; so that those things which are contained in this point, may be boldly credited. For what should it profit me to write those things which I am not able to prove, it would only turn to my disgrace and detriment. For this reason I have determined to have such a Laboratory prepared, in which not only the owners of Metallick Mines (if they desire it of me) may learn the manner by me newly invented, for the compendious melting of Minerals, so that they shall yield more Metal, than by the known and common manner; but will also shew other Secrets, that the *Magnalia* and wonders of God may be made manifest, and We stirred up to give Thanks to the Giver of all Good: Which Elaboratory shall continue open for one whole year, which being past, it shall again be shut up and cease; for I purpose not to render the whole course of my Life obnoxious to those great Labours, but at length to enjoy a quiet tranquility; which thing I am willing that all men should know, that they may spare me with their Letters, which it is impossible for me to answer, much less that I should see the Persons, seeing that the burden of journying is to me altogether insupportable; but whatsoever I

may perform at home, I will not refuse. [*See for this point Apology against* Farnner.]

Here thou hast, benevolent Reader, a fundamental Explication of my *Miraculum Mundi*, (as for those last points, to wit, 36, 37, 38, and 39, they might indeed have been very commodiously explained here, but because this is done at large, in a peculiar Treatise, entituled, *The Prosperity of* Germany; there is no need to explain them in this place; therefore what the benevolent Reader finds wanting here, there he shall find it at large, to which I remit him) whereby it will appear to all men, unless to those who are wilfully blind, that I have not ascribed too much to the Salt of the Earth, as a universal subject, but that I have proved to the whole World, that every thing which I have attributed to it, is possible, and plainly agreeable to Truth. But that these Secrets which I have proved, may be performed by the benefit of the Salt of the Earth, may not be done by other waies, and perhaps nearer, I go not about to deny, but do necessarily affirm, that the mentioned Metallicks, as well as the Mechanicks, may be performed after other manners. Only here it is verified, That the Salt of the Earth is deservedly esteemed a universal subject, which no man will deny, nor will be able to refute by Arguments, supported by truth, how wise soever he may seem to himself. Therefore let its vileness offend no man, for the best of things is oftentimes hidden in things of small price. Wherefore all men erre, who attribute good to outward splendor, in which yet it is not, but is only to be sought, found, and obtained in things vile, and of low esteem. *Note this, believe this, otherwise thou wilt never attain to any Good.*

But here some Man may object in this manner: If

Nitre be a Universal Menstruum according to my praises of it, it will thence necessarily follow, that the stone of Philosophers should be made by it, of which nevertheless I have here made no mention. To obviate this Objection, I do indeed readily confess, that I have not proceeded in this subject, any further than those things which I have now proved; but without doubt it containeth in it self greater things, than are manifested to me and others. I have made a beginning, I have strowed the way, let others follow me, and prosecute the thing further, if God shall grant it to them; as for me I am content with small things, and do not anxiously, or sollicitously aspire after the highest. Yet in the mean time, this I freely confess, if I were not so old as I am, I should not leave this Matter unessay'd. It is not to be doubted, but many men have sought the Universal stone in Nitre, but what they have found, that themselves know; and of this I am the more assured, because there Matter in the end of the Work taking fire, hath vanished like a Clap of Thunder; hence the ancient Philosophers have performed their work in Winter, lest they should be hurt by Corruscations; it is most true, and void of all errour, that a most noble essence of this sort, obtaining a power of expelling all the Natural Diseases of Mortals, and of transmuting all the imperfect Metals into Gold cannot be prepared from an impure Metal, or Mineral, nor also of Gold it self. Much less of viler and more unlikely things in which Fools are miserably Occupied, prodigally, and unprofitably wasting their Goods; but in my judgment, it should be no other thing than a Concentrated Astral fire, exalted by Art, into the form of a stone, without any other Adventitious matter. For in the nature of things, no purer Essence can be found, than fire, exercising a very great power

in all things, especially in Metals: For if we had not fire (I pray consider it) all Arts, and Mechanicks would grow cold, and be involved in the dark silence of Cessation. Arts were invented, and draw their Original from the fire, otherwise how should Metals be got out of their Minerals, and prepared for use? truly they would be of no use at all. Therefore the fire containeth more than can be believed. He that doth not know fire to be a most powerful Element, knoweth nothing, nor without this, can he find out any thing, neither by any just right can he assume the Name of a Philosopher. The fire alone, without the addition of other things, is sufficient to make Metals of stones, and particularly, the best Metals out of the vilest stones, provided we know how to use it; but universally, being concentrated into a stony matter; which last although I have not experienced, nevertheless I have observed, if (by the favour of the Almighty) a man could exalt the fire into a Corporeal fixed substance, he would certainly have a Tincture for men, and the imperfect Metals. But some man may object, by what way is this Crown to be obtained? Truly by no other than by Divine Revelation. For the Secrets of God of this sort, are not so easily to be found out, nor will they be manifested to Impious men, although the whole World is infected with a foolish madness, who doatingly think by force to extort Gold from things in which it is not, and one that hath understanding of the fire and Metals, cannot sufficiently admire those foolish and doltish Labours, which they who are Captivated by the hunger of Gold, undertake for the making the stone of Philosophers; many being willing to ascend the Ladder, are presently sollicitous about the uppermost Round, when notwithstanding they are as yet far from the lowermost step: But this

is a matter of a higher and more diligent search. In the fire, I say, are contained Secrets of great moment, yea, insomuch that some Philosophers (among whom *Plato* is the chief) write that God is most clearly discerned and apprehended in Fire and Salt. Fire, and the Immortal God alone can make light of darkness, which is granted to no Mortal to do; without fire is darkness and death: Without fire nothing can live, nothing groweth or encreaseth.

In sum, Fire is the most Noble, and most Potent Work of God in the whole Universe, he that knoweth how to use it rightly, will have need of no Art. Let the Benevolent Reader also take with him my small judgment concerning the great stone of the wise; let every man believe what he will, and is able to comprehend. Such a work is purely the gift of God, and cannot be learned by the most acute powers of an humane mind, if it be not assisted by the benign help of a Divine Inspiration. And of this I assure my self, that in those last times, God will raise up some, to whom he will open the Cabinet of Natures Secrets, that they shall be able to do wonderful things in the World, to his glory, the which I indeed heartily wish to Posterity, that they may enjoy, and use to the Praise and Honour of God, *Amen*.

The *EPILOGUE*.

I doubt not but many Men considering the great good that may be effected by the benefit of Nitre, will be desirous of knowing how they may attain it in great quantity, that so they may not be forced to buy it at a dear rate; which certainly would be a great help not to a few who labour in the fire, and I could wish

from my Soul, that all honest and pious Chymists might be able to recover some compensation for the Coals they have consumed without fruit. But seeing that I have made mention of the production or preparation of Nitre, in a peculiar Treatise entituled, *The Prosperity of* Germany; it is needless here to repeat it. But this I will say by way of prediction, that Nitre, being thoroughly known by my Writings, true Alchymy, or the Transmutation of the imperfect Metals into better, will in a short time be as common, as it was in *Egypt* long since in the time of the Emperour *Dioclesian*, who could not overcome or subdue the *Egyptians*, until he had by many Cruelties extorted their Books from them, which he burnt, and so brought them under the yoke of servitude. NB. That it is no wonder that the Transmutation of Metals should have been so common with the *Egyptians* only, seeing that Nitre is found in all places of the Land of *Egypt*, and the famous River *Nile* is impregnated with Nitre, which only by its overflowing (which it doth twice in a year) so fateneth the whole Country, that it is made very rich and fruitful in all things without dung; for the *Nile* aboundeth with Nitre, as the Sea doth with common Salt. For at certain times of the overflowing, *viz.* in the beginning, the inhabitants are wont to dig deep Pits, that they may remain full of the water, which being afterwards dried up by the Sun, Nitre is very Copiously prepared, as common Salt is made in *Spain*, and other hot Regions. This therefore I was willing to discover for the information of the Reader; if he be wise, and God be propitious to him, he will believe that I have said enough; but if not, an Explication ten times clearer will not help him. Therefore let it suffice, that what is here desired, shall be had in those Treatises which are entituled,

The Prosperity of Germany, whereby a man filled with the Love of God, will be greatly delighted.

THE CONTINUATION OF Miraculum Mundi.

In which Nature is clearly laid open to the Eyes of the whole World; demonstrating, that the chief Medicine of Vegetables, Animals, and Minerals, may be prepared of Salt-petre, and that Salt-petre truly merits the Name of an Universal Menstruum.

The PREFACE, to the READER.

This Treatise, to which I have given the Title of the Continuation of Miraculum Mundi*, containeth four excellent* Arcanums*, which I doubt not, but will prove very profitable to the publick. The first of these I offer to Country-men, as Husbandmen, Vine-dressers, Gardiners, and all such who are occupied in Tilling and manuring the Earth, that they may learn a new Method of fattening and enriching their Fields and Gardens, without the usual and customary way of dunging, and thence*

yearly acquire a greater profit.

The Second, I give to all Citizens, Merchants and others who have time and leasure, and abounding in riches, know not by what means to augment or improve their Gold and Silver. Which way I will shew them, and how to effect it after a much better and honester manner than putting it to Usury, or incommoding or oppressing their Neighbours.

The Third, I present to all Conscientious Physicians that they may learn to prepare Salutiferous and Efficacious Medicines with small charge, little labour, and in a short time; that (as becomes Christians) they may help and succour the Miseries of the sick, and acquire to themselves an honest livelihood.

The Fourth, I dedicate to all persons of great Name and Authority, by the benefit of which, they may preserve their Health entire, and recover it when lost.

The Omnipotent God give us his Divine Grace, that we may make such use of his fatherly bounty, as may tend to the promoting of his Honour, and the Love of our Neighbour. Amen.

Arcanum I.

Being a Gift given to Husbandmen, keepers of Vineyards, Gardeners, &c.

Although I had determined with my self to reserve the Press, mentioned in the first part of *The Prosperity of* Germany, (by which the juice might be pressed out of great Trees, the searching after which hath wearied many Mens Brains) for the third part of the same work; nevertheless, it seems good to me to describe it in this Treatise for the good of the

publick. And that chiefly for this reason, because the Omnipotent God hath now revealed to me other manners of extracting Salt-petre, in plenty, out of all Wood, and that without a Press; and not only from Wood, but also from all Vegetables, Animals, and Minerals, so that by an easie business, and in a short time, without a Press and putrefaction, Wood, and Salt may be converted into Salt-petre: Yea, in the space of three or four hours, every Vegetable, or Animal, as also Salts of every kind, may be so transmuted, as that they pass into a Fatt, fervid and sulphureous Salt, which afterwards by the benefit of the Air is animated, and converted into Salt-petre. Such a Salt, although it doth not presently conceive flame, and burn like Salt-petre, yet it is now brought to that pass, that in the manuring or dunging of poor and barren ground, it doth the same thing as the dung of any Cattel is wont to effect. Hence by the same Salt every pure Sand destitute of all fatness, is quickly so fatted, that it is rendered fit for the sowing and bringing forth Corn. Few will believe what Salt can perform, when spoiled of its Corrosive force. Therefore Christ saith not in vain to his Disciples, *Ye are the Salt of the Earth*. That Earth which wanteth Salt is dead; nor can it bring forth Fruit: For this inverted Salt serveth not only for sandy and plainly barren Fields, but also for those which are fruitful, that they may be sowed every year, and bring forth Fruit. Truly it is a great Gift of GOD, of which this ungrateful World is not worthy. It often happens, that a Husbandman, through want of Dung, is forced to let his Fields lie unsown, till he can have an opportunity to sow them; but what a loss is this to those who in the mean time must pay the Magistrates, Taxes, or Duties, for them, and yet make no benefit of them. Were it not better for such to

possess only the Third or Fourth part of what they have of such Land as would yield him every year an encrease. Certainly by this means, that Land which otherwise is scarce able to maintain one Countryman, would be sufficient for the keeping of ten, if it were fatened after this manner by an inverted wood or salt. In like manner also Vineyards [*and Hopyards*] might be so fattened, that the Labour bestowed upon them might not be in vain, but they might abound in Fruits.

So also Fruit-trees, and Meadows, and Pastures, which bear but little Grass, may by the same Salt be so amended, as to bring forth better Fruit**Vid. *Prosp.* Germ. *p.* 3.** and richer Crops of Grass. But let this suffice, concerning those things in this place, more shall follow (God willing) in the Third Part of *The Prosperity of* Germany. In the mean time the Plenty of Corn and Wine will be in part consumed. But I doubt not but that this excellent Gift of God will be sought into by good Masters of Families, be had in esteem, and even from this time to the World's end, be put to use for the promoting of the Divine Honour, and the well being of many Thousands of men.

But the manner of expressing of Wood by its proper Fire, and again of coagulating this acid juice, by the benefit of the fixed Salt remaining in the burnt Coals or Ashes, into a Salt fattening of barren ground, or of reducing it into *Salt-Petre* by the benefit of the Air, is indeed an excellent and singular Artifice, which rendereth all unprofitable Wood highly profitable and beneficial; yea, these are Inventions so profitable, as the like hath been yet published by no man. And this Invention is much better than that of reducing Wood into Pot-ashes, in which all the acid juice passing away in smoak,

wholly perisheth, and is lost, and from a great quantity of Wood a very few ashes remain, and out of them there is found but a little Salt (scarcely the Tenth Part) fit for the fattening of ground, or to be turned into *Salt-Petre*. For it is not the ashes, but the salt contained in them, that serves to both those purposes. Therefore this my method of extracting the juice of wood, and converting it into a good salt, is far to be preferred to the making of Pot-ashes of Wood. Nor doth this press serve only for the pressing out the juice of Wood, where Wood is plenty, but it may be also used with great profit in Moorish places where Wood is wanting, and which abound with Turf, which may be used instead of Wood. For the juice of Turf is equally fit with the juice of Wood for enriching of Land; so that no Country hath cause to complain that the Creator of all things hath not plentifully provided it with some part of that *mundane* Treasure. Countries that lie high abound with Wood, and the low afford abundance of Turf. Therefore, as in Regions of an higher scituation, an unspeakable quantity of Wood perisheth by putrefaction, and growing, and again rotting, serveth for no use or benefit; so also it is in places lower scituated, with Turf, in which very often vast Tracts yield not the least profit to any man, although in their inward Penetrals are hidden great Treasures. Seeing that it is so in Moorish and Marshy places, if they are overgrown with Grass, and Beasts should be sent to feed upon that Grass, what profit will thence accrue to men? But if they shall be invironed with too much wet or plashiness, (too boggy) so that they are impassible by men, they are of no utility at all.

There are Marshy tracts which are covered over (or swerded only with Moss) which neither afford Turf, or nourishment for Cattel, inasmuch as the

growth of Grass, and Turf fit for burning, is hindred, either by too much Sand, or large Moss. And yet those very tracts being pressed by Fire, yield a fertile juice, by which the neighbouring Fields (especially the Sandy) may be rendered fruitful. For those Moors or Marshes contain nothing but that fatness which the Rain-water hath collected from the neighbouring, high, and sandy grounds, and washed down with it self into the Valleys, where it concreteth into Moss; whence of right it should be restored to those barren sandy grounds, to fatten them. And by this means it may be brought to pass, that great fruitfulness may be conferred on much desert and waste Land, which brings no profit at all to Mankind. What I say, is agreeable to the Truth it self, and perhaps in Process of time, will be found most true, and come into use in very many places. But at this time, these things seem to Country-men, meer Dreams, and far exceed the Capacity of their maulted Brains. But as every fat Marsh is able to fatten the adjacent, barren, high, sandy grounds; so the Ocean is the Universal Medicine, and nutriment of all high and barren Regions, through which it passeth, and by the salt contained in it, bestows upon them fruitfulness. [*Vid. Nat. Salium.*] Whence the incredible Providence of the Divine Goodness manifestly appeareth, for which uncessant Thanks are to be given to the Almighty by all men, for His Fatherly Care, and great benefits never to be forgotten. But how the Sea-salt fatteneth, and maketh fruitful sandy-ground, which is destitute of all fatness, shall afterwards be exactly demonstrated. Here, by the way, in the Description of my Press, for the pressing of wood, I was willing to mention this thing. How much better therefore is this my Art and Invention of preserving the juice, and almost the whole *pondus* or weight of the wood

(the unprofitable Phlegm only excepted) in that transmutation, than the invention of reducing it to Pot-ashes? For any man of Understanding may easily see, That in that open burning of the wood the noble Sulphur is consumed by the Fire, and can be of no benefit. But if the business may be so ordered, that the wood shall burn, and not consume it self in burning, but be converted into a sulphureous Salt, it will be a thing of great moment. He that knoweth how to perform this, hath indeed attained the scope, and arrived to the desired end. Although a Coal be deprived of its juice, nevertheless it retains almost the same quantity that the wood had, whereof it was made. One pound of such Coals being burnt, scarce yields an ounce and an half of ashes, which ashes afford but a third or fourth part of Salt, fit to be changed into *Salt-Petre*, or to fatten the Earth. Therefore it is no small Art to preserve the Sulphur of the Coals (whose Virtues are great) and to convert it into so noble a Salt.

For the acid juice of wood being pressed out, and reduced to sweetness, will effect far more in the manuring and fattening of Fields, than any one can easily believe. Hereafter, if I shall see it necessary, I shall publish yet more and greater things; but I shall yet for some time suspend the publication of the Third Part of *The Prosperity of* Germany, till I see how things will prove; being assured that my Writings for time to come will be more grateful, than to this present Age. I will now enter upon the description and use of the Press so often mentioned, for the expressing and again coagulating the juice of Wood.

Of the Figure, Use, and Utility of the Press, by whose help the Juice is plentifully pressed out of Wood, without great labour, fit for the making of Salt-Petre.

The Form or Figure.

First, Let a round Furnace be built with Bricks of the same form with that in the first Figure, noted with the Letter A. It must be like a Glassmaker's Furnace, large at the bottom, and rising round by degrees to a small point at the top; in the top must be a round hole, opening about a foot broad, by which the Wood may be put into the Furnace. To the hole is to be fitted a Cover or Stopper, made of the same matter, with the Bricks, and burnt as they are, to shut up the hole. On one side of the lower part of the Furnace, is to be a door, by which the Coals may be taken out. On the other side is to be a little hole, to which an earthen Channel or Pipe of about three or four cubits long, is to be fitted, in which the smoak or fume of the wood, forced out by the fire, may be condensed into an acid juice, and may destil into a wooden Vessel or Barrel, which is to be fitted to the Pipe, to receive the destilling acid juice. See the first Figure noted with *pag.* 13. at the beginning of this Treatise.

A *is the Furnace or Oven wherein the Wood is char'd.*

B, *The Cover of the Furnace.*

C, *The Door at which the Coals are taken out.*

D, *The Canes or Pipes wherein the sap or juice of the Wood is condensed, and from thence runs into the Receiver.*

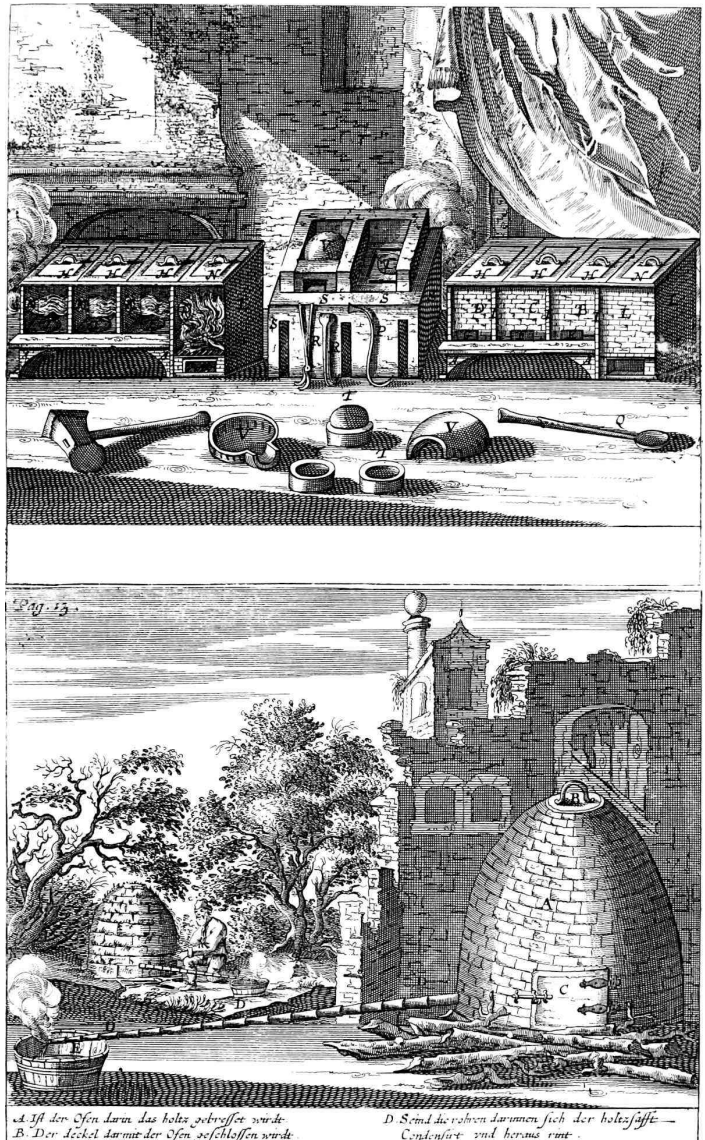
E *is the Vessel or Receiver into which the Vinegar of Wood runs.*

All things being prepared in the manner aforesaid, let the Furnace be filled with wood up to the top, and if the wood be not dry enough, intermix with it, in the putting in from the bottom to the top, some dry Shrubs or Bushes, or small Faggot-sticks, by whose help the wood may be the more easily kindled. After the wood is kindled, and burns well,

the hole in the top of the Furnace is to be close shut with its Stopper, that there may be no exit for the smoak, but that it may be forced to descend and seek its passage through the lower hole, by the Channel or Pipe. Therefore when the wood begins to burn, and yet can emit no flame, the heat presseth out all the juice, and forceth it into the pipe, in which, from the smoak, it is changed into an acid Juice or Liquor, which destilleth by the Pipe into the appointed receiving Barrel. All the wood being turned into Coals, and emitting no more fume, the whole Furnace, wheresoever it may admit the air; and also the hole to which the Pipe is fitted, is to be smeared over with wet ashes, that the Coals in the Furnace being suffocated or choaked, may remain entire. The Coals being taken out, may be put to necessary uses, being equal in goodness to other Charcoal which Colliers make in Woods. NB. I would have this understood, of such wood as is of a pretty good thickness, and suffers its self to be reduced into Coals; for if you cast into the Furnace Bushes or small Brushy wood, to press out the juice, you will obtain only a Powder of Coals, which after the juice is pressed out, is to be left in the Furnace open (not smeared over, as we taught above) till it pass into ashes, which is required for the coagulating the expressed juice; as shall appear by and by, when we come to speak of its coagulation. NB. When you have no occasion for Coals, or cannot sell them, it is necessary, that letting the Furnace be open, you suffer them to burn to ashes. If this operation be instituted in a place where there are stones fit to make Lime of, it would be worth the while to fill the Furnace with a layer of Wood, and another of Stones, from the bottom to the top, which Chymists call *Stratum super Stratum*, and after the juice is pressed

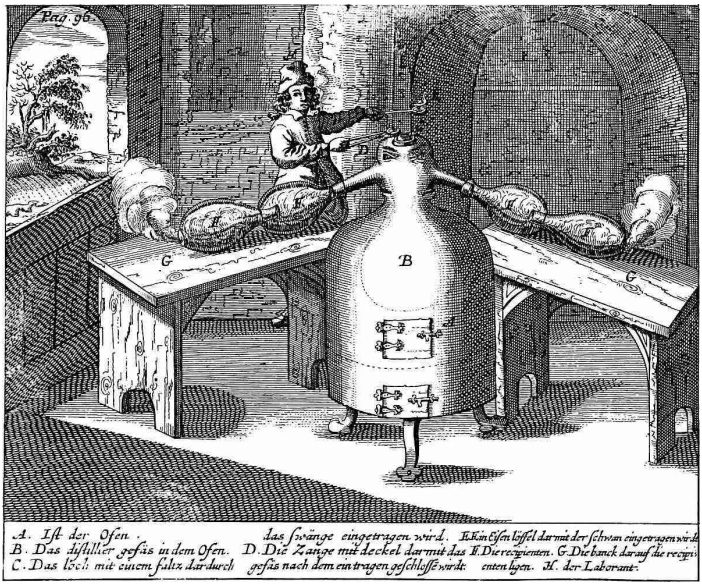
out to open the Furnace, that the wood may be turned into ashes, by doing of which at the same time the stones will be calcined, and changed into Lime, which being exposed to the air, (yet so that the Rain cannot come to it) will fall to pieces into a fine powder. To this Powder, being mixed with wood ashes, the acid juice is to be poured, which was pressed out of the wood, that those two contrary natures may mutually work upon each other, and well unite: in which operation the sharp spirit of the wood loseth its Acrimony, and the fixed Salt of the wood and stones is altered, so that from both there proceedeth a contrary middle nature, and a sweeter salt; which being long exposed to the air, draweth from thence a Life, and is transmuted into the best Salt-Petre. NB. This mixture is so to be exposed to the air, that lying under a Covering or Roof, and being open on the sides, it may be defended from the Rain, and nevertheless attract the air. If it shall be dried by the air, it must be moistened again with the Urine of Men or Beasts, that it may never be throughly dry. If these things be rightly performed, you shall have plenty of the best Salt-petre, from this matter, in the space of a year and an half, or two years at the most; which being extracted, purified, and boiled up, shooteth into very pure Crystals. The rest of the matter being again laid in its former place, under the covering or shed, and being ordered in the same manner, as before, will in the space of two years produce new Salt-Petre, which may be extracted and boiled up as before; for that mixture still remaineth good, provided it be moistened with Urine when dry, as was said. NB. He that desireth to acquire Salt-petre sooner, after the conjunction of the acid spirit with the ashes, and the precipitation and mortification of both, from that conjoined matter, by

the pouring on of water, he may extract and boil up the Salt, and then dissolve the Salt in Urine, and digest it by Circulatory Vessels; by which means he may obtain the best Salt-petre in the space of one year. This labour of pressing the juice out of Wood, and at the same time of making Stones into Lime, may be used in all those Cities and Places where wood and stones are plenty. But if this operation were to be instituted in a Wood, there would be no need of a Furnace built with stone, seeing that the Pile of Wood might be covered all over with green Turfs, after the same manner which Colliers use in making their Charcoal, only with this difference, that here must be a hole in the side, to which the duct or pipe is to be adjoined. The juice being pressed out, the pile or stack is to be every where well closed, that the Air may have no passage, if you would preserve the Coals. All being cooled, the Coals may be taken out and sold, or put to necessary uses, so that the expressed juice, which being received in no Vessel, would have vanished in smoke, plainly costs nothing; but if you do not desire Coals, let them be burnt into ashes, that they may serve for the coagulating the spirit into salt, and afterwards by the help of the air, in a certain space of time transmute it into good Salt-Petre.

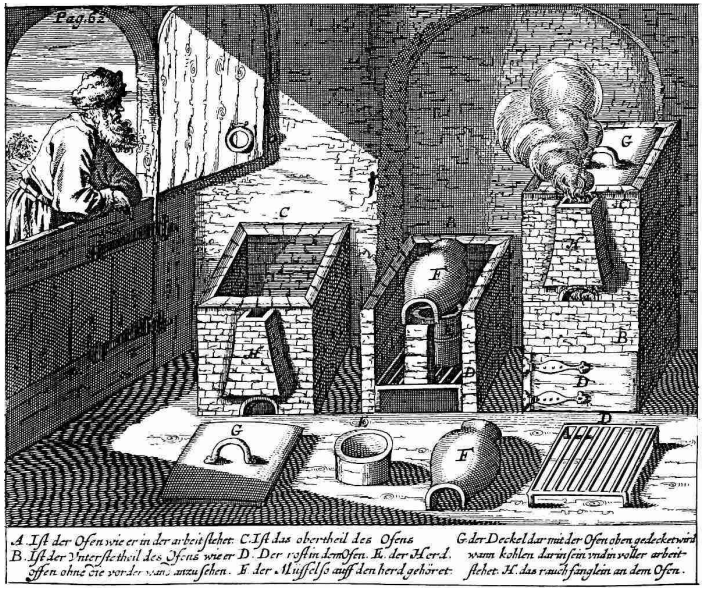


A. Ist der Ofen darin das holtz gebresset wirdt.
B. Der deckel darmit der Ofen geschlossen wirdt.
C. Die thur an dem Ofen dardurch man die kohlen aus nimbt.

D. Seind die röhren darinnen sich der holtzsafft Condensirt vnd heraus rinnt.
E. Ist ein fas darin der holt essig laufft.



A. Ist der Ofen.
B. Das distillier gefäs in dem Ofen.
C. Das loch mit einem faltz dardurch das swänge eingetragen wird.
D. Die Zange mit deckel darmit das gefäs nach dem eintragen geschlossë wirdt.
E. Ein Eisen löffel darmit der schwan eingetragen wirdt.
F. Die recipienten.
G. Die banck darauf die recipienten ligen.
H. der Laborant.



A. Ist der Ofen wie er in der arbeit stehet.
B. Ist der Vnterste theil des Ofens wie er offen ohne die vorder wand anzusehen.
C. Ist das obertheil des Ofens.
D. Der rost in dem Ofen.
E. der Herd.
F. der Müffel so auff den herd gehöret.
G. der Deckel dar mit der Ofen oben gedecket wird wann kohlen darin sein vnd in voller arbeitstehet.
H. das rauch fanglein an dem Ofen.

NB. It is here also to be noted, that the expressed juice carries along with it a sharp hot Oyl of a dark reddish colour, which is not to be cast away, but is to be poured upon the Ashes together with the acid Spirit, that putrefying with the Salts, it may with the rest put on the nature of Salt-petre. But he that will may apply the same to other uses; forasmuch as it is profitable for other things. Any Wood exposed to the Rain, or standing in the Water, easily rotting, being anointed with this Oyl, will be preserved, so that it

will not so easily rot, seeing that the water cannot adhere to the Wood, but is forced to slide off, or is hindered from penetrating the Wood. Carters, or Waggoners may use the same instead of Grease to their Wheels and Axle-trees, especially when it is a little thickened with Suet or Rosin. But the best use of it that I yet know (if you except Salt-petre) is to dissolve and boil it with a sharp Lixivium made of Lime and Ashes, by which it becometh a very hot and penetrant Soap, procuring fertility; if a poor sandy ground be sprinkled with the same and moistened: For it rendereth it very fruitful; which thing it doth not only in Fields, but also in Trees and Vines, insomuch, that one Tun of it avails more in the fatening of Fields, than ten Cart Loads of Horse-dung or Cow-dung: And a Hogshead, or Tun of this Soap may be carried into Fields and Vineyards, far remote, more easily than ten Loads of Dung, which is carried to Vineyards situate in Rocky places with great labour, and no small charge.

NB. If this Soap be used for the fattening of Vines, too much of it is not to be used at a time, least the Vines grow too fat and luxuriant; therefore its moderate use is required, which needs not that exactness in the dunging of Arable Land: Although in that an excess brings damage, and indeed it is the excess of good things that doth harm. A Tree, or Vine being made too fat by dunging, grows luxuriant, and putteth forth more fruit than it can bear and bring to Maturity. The Wood it self becomes too fat and soft, so that in the Winter it is easily injured by the cold. Whence in all things a Mediocrity ought to be observed. This Black Soap made of the Oyl of Wood, is truly a very great gift of God, in those places where Sand renders the ground barren. Hence the admirable Wisdom of our Creator appeareth, as it

were thus speaking to us: *Ye rude, and unskilful men, wherefore do you leave this place uncultivated? Because you cannot sow it with any kind of Grain, I will that it shall produce wood, and afford you a matter, with which, if you will, you may render it fat.* For it is sufficiently known, that Animals, and Vegetables rotting, dung the earth, and render it fat; which thing even the Rusticks have now learned, that they do the same without putrefying or rotting, when they cut down, and burn the Trees and Bushes, which had grown up in the Fields, during the long time of the War, and spread the Ashes on the ground, by which it is fatned. But that they know not how to save, invert, and use with the Ashes for dunging, the acid Spirit, and hot Oyl, which vanish in the burning, ought to seem strange to none, seeing that no man hath hitherto declared it to them. Nevertheless, I perswade my self that this way of dunging of Land, will come into use, in process of time, but I believe not quickly [here in *Germany*] by reason of that great quantity of grain which every place affordeth in this time of Peace. But if hereafter, a new War should happen (which God avert) and the Fields should lie many years untilled, through the want of Men, Horses, and other necessaries, then I believe, and not before, this necessary Art will be sought after.

But what other things the said juice of Wood is able to effect, we cannot here declare, by reason of our intended brevity: Yet this I will add, that if this acid Spirit be rectified, it may be used in the preparation of good Medicines, in Mechanick Arts, in the making of many fair Colours, from the extraction of Metals, Minerals, and Stones, and for all things for which common Vinegar is used; yea, far more commodiously, because it much exceedeth the common Wine, and Beer Vinegar in sharpness. And

even it self alone is a Medicine which cureth many incurable Diseases; being mixed with warm water, and used in a Bath for washing the Body, is far more efficacious than those Baths which issue out of the Earth; especially in all Scabs, in Members relaxed by the *French* Palsie, *Paralysis Gallica* [I suppose he means the Venereal Lues] in Fistulous and stinking Ulcers in the Legs and other parts of the Body. Also in the Gout, Stone, Cramp, Sciatica, Palsie, Diseases of the Womb, and all sorts of sickness otherwise to be cured by the help of Baths, which this Vinegar pressed out of Wood, far exceedeth in Salubrious Vertues.

The same also doth the hot Oyl which is expelled by expression with the Spirit, which exerteth wonderful Virtues in curing those Ulcers and external affects. For which certainly, as a great gift, and to be easily found in all places, none of those who are burdened with grievous Diseases, can render sufficient thanks to the Almighty: But especially the Poor, who have not Money to buy Physick.

NB. Here also it ought to be observed, that those who use the Bath tempered with the juice of Wood, should before they enter into it drink some spoonfuls of this Vinegar. For this Vinegar by penetrating the whole Body, casteth out all things superfluous and noxious to nature by sweat, and openeth all Obstructions of the Liver, Spleen, and Lungs: And especially when the Vinegar is elicited from a Wood, or Herb, which is endowed with peculiar Virtues for the eradicating of those Diseases. As for Example: The acid Spirit of the Vine, Beech, Birch, and the like, taketh away the Obstructions of the Internal Bowels. That of the Oak, and other hard Woods, cureth the Corruption of the Blood, and all Diseases

proceeding thence, as the Pox, Leprosie, external Ulcers of all sorts, Scabs, Fistula, and all open Sores. Also all Contractures or Cramps, Falling-sickness, Apoplexy, and Palsie. So the Vinegar of Ash, Cherry-tree, Plumb-tree, Sloe, or Bullace-tree, Medlar-tree, Arbute-tree, and the like Trees, which bear Fruits having Stones or Kernels, cure the Gout, and the Stone of the Reins and Bladder. That of Balsamick Herbs, as St. *John*'s Wort, Sage, *Paul*'s Betony, or Fleuellin, Sanicle, Betony, Lung-wort, Liver-wort, Saxifrage, and other like, taketh away the internal Hurts of the Liver and Lungs, and all inward affects arising from Blows, Falls, *&c.* So efficacious a Medicine is this juice of Wood, that the most costly Galenical Compositions are forced to give it place. In making the Bath one Pound of the acid Spirit is to be added to ten pints of water, and this quantity to be augmented, or diminished, according to the condition of the Patient and the Disease.

Before the use of the Bath, some drops of the Oyl may be adjoined to the spoonfulls of Spirit, which so fortifieth the Spirit, that it more readily penetrateth the body, more forcibly accosteth the Disease, and the sooner expelleth it. In Gouty Pains, and in the stone of the Kidneys, the same Oyl being rubbed upon the part with the Spirit, gives a relief not to be contemned. In brief, this juice of Woods and Herbs, if it be duly prepared and used, is able to shame and confound all the Apothecaries Shops of Galenical Medicines, notwithstanding their proud Furniture of Painted and Gilded Glasses and Boxes.

And I do not doubt but in process of time, that Physicians out of a good Conscience, will explode those unprofitable Coctions, and in their room institute better preparations, that God may have his

due praise, and the miseries of the sick receive succour.

For although this acid water doth not contain the Virtues of the whole Herb, nevertheless it is to be reputed and used as an efficacious water of Herbs, in Medicine, seeing that that which is used in the Shops hath very little virtue, as daily experience witnesseth: It being nothing but the pure Phlegm of the Herb, the chief Virtues and Essence of the Herb remaining in the supposed fœces, although the water hath carried along with it something of the Smell and Taste. Look upon any dry Herb, which the heat of the Sun or Air hath deprived of all its Phlegm and Humidity, and see whether it be also deprived of its Smell, Taste, and Efficacy. And although in length of time it will lose all its Taste and Smell, nevertheless its chief Virtues yet lie hid in it. Yea, although its *acetum* be drawn from it by distillation, that an unskilful man would think that there remained no virtue at all in the remaining black Coals of Wood or Herbs, yet the most efficacious Virtues yet lie hid in the best Sulphur and Salt. And that great Virtue doth yet remain in the Coals, is not unknown to Rusticks, who in the Winter burn them to warm themselves, and boil their food, which thing they could never do by the Phlegm separated by distillation. Those black and contemptible Coals are of so great vertue, that they emulate the powers and properties of the most Noble Creature the Sun, for which cause they merit the name of Terrestrial Suns. For whatsoever the Astral and Sydereal Sun effecteth in the superiour Firmament, the same doth the Terrestrial Suns, *viz.* Coals, which are its Vicars, also effect. The superiour rendereth all things partakers of Life and Growth, the same doth also the inferiour Suns. In the Winter time when the Sun is far distant from us, all the

Vegetables of the Earth are as it were dead: In the Spring upon his return, all things revive, grow, move, increase, and are nourished.

Insects themselves which have hid themselves in Holes and Caverns of the Earth to fly from Cold, and have lain as dead, do again come forth into the light. All which effects are produced by the superiour Sun. The same things also the inferiour Sun can effect. For when Flies, Spiders, and other like Insects in any Parlour or Chamber, to shun the cold, betake themselves to Holes and Chinks, and there lie as it were dead; the first heat they perceive by the making of a fire in that room, recover their former life, and again creep out of their hiding places, as upon the Suns approaching us in the Spring. Yea, if in such a Room made hot, there had been before reposited great Insects, as Frogs, Snakes, Lizards, and the like, as also Herbs killed by the cold, they would revive, recover strength and grow equally as if they had been illustrated by the Rays of the great Elementary Sun. Therefore if this Contemptible Coal, which in the judgment of the unskilful is deprived of all its Juice and Virtue, can perform these things; what a Medicine think you may be prepared by the help of Art of such a Coal?

But some Putatious Physician may here ask; who can prepare any Medicine from so dry and insipid a Coal? It can neither be dissolved by the strongest Corrosive Liquor, nor by the most intense fire, if no air come to it: of which, if the least Portion shall touch it, it presently conceiveth flame, and is consumed, so that nothing of it remains but a few ashes mixt with a little Salt. And those Virtues which refresh all things living, and revive the dead, all perish by Combustion, and vanish in smoak, which

could they be taken and preserved, might doubtless afford a Medicine of great moment. To this I answer: wherefore cannot so great an efficacy be preserved, and used for the making of a good Medicine, before that it vanisheth by burning, and flieth into the air? Whatsoever Philosopher is ignorant of the manner of effecting this, truly he is a weak Philosopher, who ought to blush in that he setteth himself before others, and contemneth them who exceed himself in Learning and Science. He that knoweth not how to use any palpable and coagulated matter, before it be consumed by burning, and vanisheth away, by what means will he elicit the same out of its Chaos, and concentrate it? But that the way of freeing this Noble Sulphur from its Bonds and Keepers, is not known to everyone, is no wonder. For it will not come at every call. Of all the Philosophers, there is none who more clearly and openly teacheth by what means it may be delivered from its Bonds, than *Sandivogius*, who expresly saith, *That this Sulphur lies hid and is held Captive in an obscure or dark prison, and kept by very strong keepers. But that Salt only in the conflict or fight, gave him a deadly wound.* No Man hath spoken more clearly than this worthy Author. Therefore he that knoweth not how to extricate that Vital virtue from its bonds, and how to use it in Medicine, let him read the above cited *Sandivogius*, who will clearly instruct him. If he cannot learn of him, there is no reason why any one should labour to help him.

I will propose the matter by a similitude; a Man is compounded of three things, *viz.* Body, Soul, and Spirit; The *Body* is visible, immoveable, gross, earthy, and corruptible: The *Spirit* is invisible, movable, living, and nevertheless mortal; But the *Soul* of Man, which is his most noble part, is immortal.

In like manner, there is also a certain *Anima* or Vital Principle in Vegetables and Minerals, although there are few who know how to extract it. Therefore as in Man the Soul is the most noble part; to which the Spirit is inferiour, and the Body the lowest or vilest; so it is also with Vegetables and Minerals. To acquire the *Anima* or Vital Principle of any Vegetable or Mineral, that fixed and constant *Anima* is to be separated by the help of Art, from the gross, unprofitable, and dead body. For as long as the gross body adhereth to this noble Principle, so long it cannot move it self in a due manner, nor demonstrate its nobility, but is held Captive by its gross body, till it be set at liberty, by some body who knows how to dissolve its bonds. Being freed from its bonds, and the gross body laid aside, it can presently exert its power. Therefore let this be the principal care of Physicians, that instead of a body dead, and destitute of Virtue, they labour to attain the fixed and living *Anima* of Vegetables, that using that in the cure of diseases they may perform far greater things than now they do.

I have here inserted this discourse, only for this cause, that I might shew that a whole or intire body is of very little moment, and that that thing whereby any Good is to be effected in Medicine, is to be found only in the most noble part, to wit, the *Anima*.

And even, as in Minerals, besides a fixed and incombustible Sulphur, there is also found another, combustible and fugacious: so also there is found a twofold Sulphur in Vegetables, in the destilling of which, by a Retort, an Oil is expelled, together with the acid Spirit and Phlegm, which indeed hath its virtues, but can in no wise perform those things which that part remaining in the black Coals is wont

to effect. For by how much a Medicine shall be more fixed and constant, by so much the more do they enter and encounter long and fixed diseases; so on the contrary, fugacious medicines are found less efficacious in eradicating the same.

What I have said concerning Vegetables, *viz.* That there is in them a volatile and fugacious spirit, and a constant fixed *Anima*; the same is also to be understood of Minerals, which besides a combustible Sulphur, possess also a fixed and constant *Anima*.

But whosoever knoweth how to conjoin the *Anima* of Vegetables with the *Anima* of Minerals, hath obtained a Medicine which is able, after a wonderful manner, to corroborate the Vital Spirit in Man. For the *Animæ* of Vegetables and Minerals, are the Rays of the Sun coagulated, which necessarily contain a vivifying or enlivening power, seeing that the sun maketh all things partakers of Life.

And a man, if he only beholds the sun, or its Vicar the fire, the earthly sun, although he be in some very deep and cold place under ground, where he cannot feel its warming and enlivening power; yet he shall perceive his Heart to be recreated and strengthened by the bare aspect of it: But how much greater a recreation and corroboration would he perceive, if he should take the *Anima* of Wine, or of some other Herb conjoined with the *Anima* of Gold, for the curing of his body, with both which it hath a great familiarity; for like rejoiceth in like, and desireth to be joined to it: And therefore it ought to seem strange to no man, that I assert, the *humidum radicale* of the humane body may be augmented by the *Animæ* of Vegetables and of Gold: For the *Anima* of Vegetables is nothing else but an essential universal salt, which is found in all things.

Seeing therefore that Philosophers confess, that the redness of gold and whiteness of silver may be encreased by its own universal salt, it is reasonable for us to acquiess in the same opinion, and to maintain it against those that erre. A visible and palpable demonstration is to be credited. Nevertheless I easily perswade my self, that this discourse of mine will not be credited by many, which I cannot help. It contenteth me, that I have written the Truth, and lighted a Candle to my Neighbour.

After one and the same manner, of Wood of little or no worth, I have shewed the making of *Salt-petre*, for *Souldiers*, *Gardeners*, *Vintners*, and *Husband-men*, fit for the dunging of Orchards, Vineyards, Fields, and Meadows; of commodious Baths, for the Sick; of a good Vinegar for Chymists and Apothecaries, necessary for many extractions. It now remains, that I also offer a Gift to the Owners of Metallick Mines. If they shall humect or moisten the *Calx viva*, or Lime made of stones, in the Press, as we have taught, with the *Acetum* or Vinegar of Wood, they shall obtain a cheap Flux, by which those hard and untractable stones digged out of metallick Veins, may easily be melted; for the acid spirit of Wood is fixed by the Lime, and converted into a salt, causing an easie Flux. Nevertheless, this salt will be of greater profit to Husband-men, for the dunging and fattening their Fields (for whose sake I also describe it) than in the melting of Mineral bodies. Physicians may use the noble and efficacious juice of Wood, for the happy cure of many incurable diseases, and to their own honour and profit. This Vinegar of Wood being exposed in Hogsheads to the cold in Winter, that it may be frozen to Ice, the Phlegm only freezeth, but the sharp spirit, with the Oil, is not turned into Ice,

but remaineth in the middle of the Hogshead so sharp, that it corrodeth metals like *Aqua-fortis*. If Princes and Great men would be pleased to take care that the Wood in their Dominions (otherwise rotting in the Woods) might be turned into *Salt-Petre*, they would do well, and it would not repent them of their labour, seeing there is a time at hand, in which *Salt-Petre* will be much wanted.

There is yet another secret, which for the sake of Country-men I ought to discover, which will yield them no small profit; which is this: If Hop-poles be burnt at the ends which are to go into the Earth, and those burnt ends dipt in the Oil of Wood, that they may imbibe or suck in that fatness, and afterwards set into the earth, they admit no humidity or moisture, which otherwise they are wont to do, being every year diminished in that part which standeth in the earth. It also cometh to pass, that they communicate their fatness to the vines and stalks of the Hops to which they are joined, and render them more fat and fruitful, by this means affording a twofold profit, first in preserving the Hop-poles from rotting a longer time than they are wont to last. The other is, That the Roots of the Vines and Hops, drawing fatness and nourishment from the bottoms of the poles grow the faster, and are more fruitful. Moreover, those ends of the poles, in length of time growing rotten, yet there is no loss of the Oil, but still the same profit remaineth, seeing that those rotten ends of the poles being taken up and planted again in the earth with the Roots of Hops, they will afford them nourishment for some years, better than if they had been dunged with dung. In like manner, by the help of this Oil of Wood, strong and durable quick-hedges may be made for the fencing in of Vineyards, Orchards, Gardens, and Hop-yards, by

which Beasts and Thieves may be kept out. For this purpose the sharp end of the stakes fit for the Hedges, are to be put into the Fire till they grow black, and then whilst they are hot, be dipped into the Oil, that they may well imbibe the same.

With these, being drove into the ground after the usual manner, an Hedge may be made by planting a young shoot or set of Thorn, Crab-tree, *&c.* all along between the Stakes. Those sets or sprigs, which otherwise, growing but slowly, are many years before they come to a requisite height and thickness, their roots now obtaining fatness and nourishment from this Oil, arrive to maturity in less than half the usual time, and become a thick and strong Quick-hedge before the Stakes are rotten. Moreover, there is no danger of wild Beasts coming into those places where the Hedge stakes are imbrewed with this Oil, seeing that wild Beasts shun all strong odours, and dare not approach them. If you shall imbibe Hempen-Cords, or such as are made of the Bark of Trees twisted together with Grass, with the said Oil, and then bind them about Fruit-trees, it will hinder the creeping up of Spiders, Ants, or Pismires, Palmer or Canker-Worms, and other the like Insects, which are wont to damnifie Fruit; inasmuch as those Insects plainly abhor such hot Oils. *By this means also may Rats and Mice be hindered from creeping up Hovel-posts, and devouring the Grain.*

There is yet another manner of promoting the dunging of Fields, and the happy growth of Seeds, and not only those Fields which are lean and sandy, to which Cow-dung may be used, but also those which are hard and craggy, in which neither sand nor any dust of Earth is found.

But in making manifest this Artifice to the whole

World, my intention is not that the World should thereby be inriched with great profit, as I have endeavoured by describing the manner of Dunging poor Sandy Land, by the acid juice of Wood. My Scope or end is only this, That every man may see and consider how many wonderful things may be effected with wood and shrubs, which are every where found in great quantity, and nevertheless are of no use or profit.

Who would credit any man, affirming, that it might be effected, that not only Grain, but all sorts of Trees, and excellent Vines should grow in any hard and naked Rock, without the addition of any Earth or Dung? Truly, I believe that there is no man in the World, to whom this will seem likely. This will more amaze *Farnner*, with his whole Crew, than my *Miraculum Mundi* did. Yet because the thing may be done, I cannot forbear to divulge the Artifice, only to this end, that I may subject the Divine Wonders to the eyes of the blinded World. But yet it cannot be, but that it will be profitable in many places, in those especially which lie near Rivers, and afford Wine; such are those which lie upon the *Mœne*, *Mosell*, *Necker*, *Rhine*, *Danube*, and other the like Rivers, where great and craggy Mountains frequently occurr; in which having the heat of the Sun all the day, Vines might be commodiously planted, if Earth and Dung could be carried thither. Certainly Vines grow no where better than in Rocks and Craggs, into whose clefts and cracks they insinuate their roots, that they may thence attract to themselves nourishment, which few other Plants are wont to do: And because for the most part much Wood grows about such Rocks, it would be worth while to press out its juice, by which the hard Rocks might be reduced into a soft Dust, fit for the Reception of

Vines, which might be performed by this operation; which nevertheless would not be necessary to undertake, but for the manifesting of the wonders of God to the unskilful, and shewing that such things may be done. If any desireth to plant in a place of this sort, in which Vines or Trees growing freely in rocky and stony places, as Cherry-trees, Plumb-trees, Service-trees, and others, bearing Fruits which have Stones; at the beginning, a little hole is to be cut in the Rock by the help of Masons Tools, which is to be filled with the Vinegar of Wood; which being done, the hole is to be covered to keep off the Rain. After some daies, let him see whether the Vinegar hath insinuated it self into the Rock, and again fill up the hole with fresh Vinegar, and cover it with a Stone, as before. And this Labour is to be repeated in the Summer time so often, till the Rock hath drunk up much Vinegar, and be thereby so softned for the space of an Ell in length, breadth, and depth, that it may be easily dug up with a sharp Instrument, and become a great hole; the matter digged out is again to be cast into the hole, and to be again filled with the Vinegar of Wood, and covered with stones, and so left till all the matter grows so soft, that it may be crumbled to pieces with the fingers. And in the *Autumn*, when Trees have lost their Leaves, or in the *Spring*, before the Leaves come forth, *viz.* in the Month of *March*, Vines or Trees are to be planted in the matter contained in the hole, and the matter to be trampled close down about their Roots, then all to be wetted by the pouring on of Water, and the event to be committed to God. So the Vines or Trees grow as well as if they had been planted in other manured ground. The reason is this; Because the Rocks consisting not of Sand, but of stones, fit for the making of Lime, do contain much *Salt-Petre*, as also

the acid juice of Wood, partaketh of the same nature, this, by corroding the Rock, dissolveth the *Salt-Petre* in the stone, and setteth it free, and at the same time loseth its own corrosive Acrimony, so that it cannot hurt the Roots of Vegetables, but is like to Cow-dung or rather better, for it fatteneth and nourisheth the Roots better. Therefore a Tree or Vine planted after this manner in a Rock, if it shall once put forth, afterwards dieth not, but the Roots insinuating themselves into the Clefts of the Rock, seek their own nourishment. Nevertheless every Winter when the Leaves are fallen off, some of that acid juice is to be poured to the Trunk of the Tree or Vine, that during the Winter, it may again soften some Portion of the stone, which will afford new matter of nourishment to the Roots. And by thus affusing of fresh juice every year, there will be no need of Earth or Dung, seeing that the Stone is changed into earth and dung by the juice of the wood.

Although this *Arcanum* will seem a thing impossible to many, yet it is most true, of which, if any will make trial, he may easily do it in this manner: Let him get a stone which doth not consist of sand, but of such of which Lime is made, which being exposed to the Sun, let him pour upon it the acid Liquor of Wood; which when the stone shall have well imbibed or drank in, let him pour on more, and repeat this labour so often, till the stone be rendered so soft, as it may be rubbed to powder between the fingers. In this matter, rubbed or ground small, let him sow any Seed, which will sprout forth thence, as if it had been sowed in any good earth: The reason we have already declared, *viz.* because the stone is converted into earth, having its own *Salt-Petre*, or proper Dung in it self, and moreover, changing the juice of wood into *Salt-Petre*. He who

rightly understandeth and followeth my Doctrine, and shall set about the Work with diligence, will without doubt attain his end. But if he tries with a Sandy stone, he will effect nothing. For stones of this sort want a nourishing Salt, and they wholly refuse solution by the Liquor of Wood, so far are they from imbibing, coagulating, and changing it into a Dungy Salt. But after the following manner any one may prove, that natural Salt-Petre may be made of the stones of which Lime is made, and the juice of Wood. Let him take some pieces of this sort of Lime-stone, not yet burnt (for when burnt, it is much more facile, as I have taught) and immerge or dip them all over in the Vinegar of Wood, and dry them in the heat of the Sun, or some other warm place, and let him repeat this labour so often until they be so soft that they may be rubbed or ground to pieces like Earth. From this ground matter extract the Salt with Rain-water, which will be plainly like to Salt-Petre. So of the Stone is made Earth; of the Salt of that Stone, and the Vinegar of Wood, Salt-Petre; or a salt equally Serving with the Dung of Cows or Sheep, for the dunging of all Vegetables.

Nevertheless we have not written these things to that end, as if it were necessary to plant Rocks with Vines, by the help of the Vinegar of Wood. Our purpose is only to set forth how the great efficacy of the juice of Wood may be known, and how by its help, fertility may be procured even to the hardest Rocks, which being hitherto unknown and unheard of, my diligent search and enquiry hath now brought to light. Let it not seem absurd to any, that I ascribe so great power to the Vinegar of Wood; for common Vinegar doth the same thing in softening of hard Rocks: Why then should not this acid juice of Wood do it, which far exceeds the common in strength and

sharpness? It is said, that *Hannibal* made a passage through the *Alps*, for himself and his Army, softening the Rocks by the benefit of Vinegar; what Vinegar that was, Histories do not mention. Perhaps it was the Vinegar of Wine; but if he had had the Vinegar of Wood, he might sooner have attained his desire.

This *Arcanum*, without doubt, will give occasion of finding out many other profitable things, by the help of this Vinegar. I have opened the way, let another come, who by searching further may enlarge it, that thereby some perfection may the sooner be acquired. There are many things lie hidden in Nature, which through our sloth and negligence not being sought after, yield no profit to Mankind. But I doubt not but time will produce sedulous men, who will make a further progress in this Vinegar, so that much profit may redound from it.

There is found another kind of stones, which for the most part is used for the building of Houses, which being soft, is easily cut, so that steps or stairs, and Window-frames are made of it. It is to be reduced by the help of Fire into a Calx of a white, ashy, and reddish colour; it also refuseth to be melted; nor is it like to Sandy stones, but is Partaker of both natures, and contains much Salt-Petre. But neither by its reduction into a Calx, nor by the pouring on of water, can it be extorted from them, except it be first prepared after a singular manner, for then it yields to water; concerning which thing I have written a peculiar Treatise, which God willing shall shortly come forth. There are whole Mountains of this sort of stone, containing a great Treasure of Salt-Petre, which hath hitherto been known to none.

These few things I was willing to offer to Countrymen, concerning the pressing of wood, and the utility

thereof. The Circulatory Vessels in which the juice of the wood, and all the salts of the Air are animated by an uncessant motion, and converted into Salt-Petre, I will not divulge at this time, but reserve them for my self and my Friends. [*These are described in the Third Part of* The Prosperity of *Germany*.]

In the mean time this excellent Art will not sleep, but will be exercised in many places. Now whosoever shall need the same, he will know what is to be done. For I have determined to bestow the same for the good of my Neighbour, lest it should be buried with me in oblivion.

I have also an Artificial Invention (*which is taught in The Prosperity of* Germany) of turning common salt in the space of a few hours, so that it shall be plainly like Salt-Petre, for the enriching of poor, lean fields; and yet an hundred weight of it will scarce cost a *Doller* (*which is about* 4 *s.* 6 *d.*) Which is indeed a singular Gift of God in these last times, which will be highly profitable both to the Rich and Poor, in all places of the World. For if the Culture of Wine and Corn shall every where become better, and more profitable, by the help of this Art, it cannot be, but that all men will receive profit, and obtain a more commodious way of living.

For by this Art, not only all Fields, whether they have lately brought forth Fruit, or whether they have lain fallow, and for some time brought forth nothing, are brought to that condition, that they may bear Fruit every year: but also barren places, which would never bring forth any Fruit, are rendered fertile, and fit to bear Fruit; so that no place can be found in the world, how barren soever it be, which by this *medium* may not be rendered fertile. Moreover, this Art is to be greatly esteemed, because by it ground

may be fattened in those places where no Cattel are found, and therefore afford no dung; seeing that hitherto no other than the ordinary way of dunging hath been known.

So also in places far remote from the Dwellings of men, to which Dung cannot be carried, this Art may be exercised with great profit; especially when Dung is difficult to be procured, or costs dear, and is not carried to those remote places without great charge, for which reason they cannot be tilled, but are forced to lie uncultivated.

Seeing that one Hogshead of my fattening Salt can effect more than some Cart-loads of common Dung. Nevertheless this is to be noted, That when any Field dunged with the said salt, is to be sowed with Corn, the seed is first to be macerated or steeped for one night in water, in which that salt is dissolved. For being so prepared, it will grow faster than if it had been committed to the Earth, without any foregoing maceration.

Consider, when the Souldiers have taken away the Horses and Carts, carried away the Oxen, devoured the Cows and Sheep, and wasted the whole Country, by what means shall the wasted Fields be dunged and restored to the Husband-man, that returning to their former fruitfulness, he may reap from them the expected Fruit.

Indeed, in time of Peace, when Horses and Oxen abound both for the ploughing of the ground, and making of Dung, Dung is alwaies of worth, there never being too much of it, and therefore this my Invention may bring not a little profit. Whence it may be of a far greater advantage in those places, where (by the Divine permission) those Locusts have eaten up all things. Ought we not then to receive so

excellent a Gift of God with all Thankfulness?

The Omnipotent GOD give to us all His Grace, that we may shun all temporal and carnal Security, as the deceitful snare of the Devil, and seek after that which is eternal, constant, and perpetual. Amen.

Arcanum II.

Being a Gift presented to rich Merchants, &c. *that they may improve their Money and Estates without Usury.*

Although I had determined to treat of this *Arcanum*, with other excellent uses of *Salt-Petre* in the emendation of Metals, in the Third Part of *The Prosperity of* Germany; yet for certain reasons I have deferred the publishing of that Book for some time; but considering my profitable Inventions of making *Salt-Petre*, and not doubting but that there will be found men who will put *Salt-Petre* to better uses than that of making Gun-powder, I could not forbear here to describe one good and profitable use of the said salt in the emendation of Metals, which is free for any boldly to experience, seeing that I have written the very Truth. He that shall follow the sence of my words, and hath some skill in metallick Labours, will not lose his pains, but will thence reap no contemptible profit. But if any man would perswade himself that such a work is to be done without labour and trouble, and great Masses of Gold to be obtained with idleness, he will be greatly deceived, not considering that this requires his putting his hand to the plough, and using great diligence.

I have described the following Operation openly

and clearly; affirming, that it will succeed to the Operator, according to my description. If any shall erre in the performance, let him blame himself and his own ignorance, and not me. For in this process all things are plain, and to be understood according to the Letter, and may also be performed by an easie imitation.

The manner of the Operation.

R. of Copper one part, of Gold or Silver two parts, and of *Regulus Martis* three parts, all which melt together in a good and well-covered Crucible, taking great heed that no Coals fall into the Crucible and corrupt the Work. All being melted, and the cover taken off, yet warily that no Coals fall into the Crucible, cast in as much *Salt-Petre*, well dried and powdered, as there is of Copper and *Regulus* in the Crucible, to the melted matter, and again cover the Crucible, with the same caution about the Coals, which so put about the Crucible, that they may not lie upon its Cover, but it may be at liberty, to be commodiously lifted up with the Tongs for the inspecting the Mass in the Crucible. For if the Fire should be too great, the *Salt-Petre* would boil over the Crucible, and inferr loss. And this may easily happen, seeing that the *Salt-Petre* entring and working upon the *Regulus* and Copper, swelleth and riseth up. Wherefore it is necessary, that this Work should be done in such a Furnace, as I have described in the Fourth Part of my Furnaces, having its doors, by which the Fire may be governed, and rendered stronger or weaker.

After that the *Salt-Petre* hath imbibed the *Regulus* and Copper, and turned them into a reddish *Scoria*, which is wont to be done in the space of a quarter or half an hour, the lower door being opened, the upper

one must be shut, that the Fire becoming stronger, may melt the *Scoria*, till they flow like water; which when you see, by lifting up the Cover a little, remove the Coals about the upper part of the Crucible, and take off the Cover, and having taken good hold of the Crucible with your Tongs, lift it out of the Furnace, and pour out the melted matter into a melting Cup or Cone, [*Such a one is described by its Figure in the Fourth Part of Furnaces*.] being first heat, and well smeared within with Wax; in the bottom of which, when cold, there will be a *Regulus* of pure Gold, which being freed from the Scoria, will be so much encreased in weight, as it hath attracted from the Copper and *Regulus Martis*, which will be the fiftieth part of the weight of the Gold.

The red Scoria, which have a fiery taste upon the Tongue, contain the Salt-Petre, Copper, and *Regulus* reduced into a Scoria; which if you would separate from the Salt-petre, as soon as you have parted it from the *Regulus*, put it again into the Crucible in the Furnace, put a Coal to it in the Crucible, which being well covered, let it again flow well for a quarter of an hour. In this Operation, the Coal or Coals put to the Metals, *viz.* the Copper and *Regulus* of Antimony, will separate them by precipitation from the Salt-Petre, so that they will become a *Regulus* together, and the fixed Salt-Petre will be separated, and rest upon the *Regulus*, from which being cooled, it may be removed by knocking it off. If the operation be rightly performed, you will recover almost all the *Regulus* and Copper: but little also of the Salt-Petre is lost, which hath now put on another nature, becomes fixt, and answereth in virtue to the salt of Tartar. NB. Because those Scoria cannot be so perfectly removed from the Salt-Petre by the Coals, but it still retaineth somewhat of the Copper and *Regulus*, which the

Coals could not precipitate; they may be kept in some warm place, lest they be dissolved by the air, till you have a quantity of them; which being reduced by burning Coals, may yield their Metal. Of which more shall be said anon.

This Labour, although it squares not with the capacity of the rude and unskilful, nevertheless it is easie to be done by those who have any knowledge in the melting of Metals. But all the manners of operating cannot be so accurately delivered, that every unskilful man should presently be rendered capable of understanding them; I write the Truth openly, and he that well understandeth me, may rejoice with profit. I write not to unskilful *Tyro*'s, but only to those who know how to handle Metals in the Fire. It may be here asked, Whether this augmentation of the Gold, ariseth from the Copper, or from the *Regulus* of Antimony? I answer, from both, but more from the Copper than from the *Regulus*. For there is no Copper or Antimony found, from which Gold is not elicited after the aforesaid manner, seeing that there is in both an invisible and spiritual Gold, nevertheless one containeth more than another; and being melted with Gold, give it forth to the same, which also attracteth it. Therefore as often as Copper, and Regulus of Antimony, and Salt-petre shall be melted together with Gold, so often will the Gold receive an encrease; so that this Labour being repeated eight or ten times every day, there will be an augmentation of the Gold not to be contemned, for besides all the Cost, it will afford the daily Gain of one Floren out of an hundred. (*A Floren is 2 s. in* Germany*, about two and twenty pence value in our Money*.) This is certainly a profit to those who will put their Money to Usury, much more

honourable and safe than their trusting it in the hands of others.

But seeing that this Labour is to be performed in Crucibles, (and that too in large ones, if the gain aforesaid be expected) it doth not want its trouble and difficulties; for if a man will use great Crucibles, he can hardly perform the Operation above three or four times in a day; and if he use small ones, although it be ten or eleven times repeated in a day, yet the profit will be very small. I will therefore here appoint a way to do it without Crucibles, upon Hearths instead of Crucibles, which neither let out the melted matter by running over, or by their cracking or breaking, as Crucibles are wont to do, but alwaies remaining in the Oven or Furnace, save the trouble of putting in and taking out of the Fire. For Crucibles, how good soever they be, being exposed to the cold Air, by taking out, and thence being suddenly again put into a great heat, are very easily broken. From whence it is manifest, that great danger of losing some of the Gold attends the use of great Crucibles, so that their use is to be abstained from, altho' the Work it self be of great profit. But good strong Hearths may be used for this Labour, without all danger; for as long as they are left in the Furnace, so long they are good, and the melted Mass doth not flow out. If I had not found out this way of working with Hearths, I should not have divulged this operation, which is as followeth.

The manner of preparing the Hearths or Tests.

An Iron Ring or Hoop is to be made, either square or round, of the thickness of one finger, and four fingers high (or deep) one side being a little narrower or lesser in compass than the other; being well

smoothed or polished on its inside, having two ears or handles, whose magnitude and space will be known by the quantity of the matter which is to be daily handled. To prepare the Focus or Hearth, place your Ring or Hoop upon some smooth stone, and then put into it, so standing, your Earth, being first rightly prepared, (*for this purpose our* Stafford-shire Clay *is excellent, as also for making of Crucibles to abide the Fire*) so that it may a little exceed the upper superficies of your Hoop, force it down strongly with a broad Iron Hammer, by beating or knocking it in, and what riseth above the top of the Hoop, cut off with a Knife, that it may be even with the Ring; then remove it with the Ring, and strew upon the stone some fine sand, or rather the fine powder of broken Crucibles, upon which set the Ring, with the bottom upwards, that the other side, which before lay upon the stone, may be wrought in with the Hammer, as the first, so that the Ring or Mould may be exactly filled with the Earth. The Focus or Hearth being prepared in this manner, the larger side thereof is to be so excavated or hollowed away by a bowed or crooked Knife, having two handles, so that the rotundity declining from the Superfices of the Ring, even to its middle, where inclining it self, it may keep the thickness almost of a finger at the top or superficities of the Ring, and so it will become like a Vessel or Pan, having a round or spherical Cavity, such Hearths or Tests are wont to be prepared of Ashes, for the bringing of Gold and Silver to a purity in Metallick Mines, Mints, *&c.* at length that hollowed roundness is every where to be smoothed with a smooth and round Hammer or Mallet, and after the smoothing, the whole Test being inverted with the Hoop, is to be set upon a Board, without stirring it; if the inside of the Hoop or Ring were

before besmeared well with Oil, it will the easier come off of the Test, which being exposed to the Air, and dried a little, is then to be set in the heat of the Sun or warm Furnace, that all the humidity being taken away, it may obtain its requisite dryness, before it be put into the Furnace to endure the Fire; for except it be very well dried, it will crack or chap in the Furnace, and be wholly unprofitable for this Work.

The Test being taken out of the Ring, and set by, the inside of the Ring is again to be anointed with Oil or Grease, for the making of another Test, of which so many are to be made as need requires, or the quantity of the prepared Earth will allow. The earth that was left in the hollowing of the first being mixed with the rest, whilst it is yet moist, serveth again, so that there is no waste or loss of the Earth. The same earth also serves for the making of the Covers or arched Roofs with which the Tests are to be covered, to keep the Coals from falling into the melted matter. NB. There is no need of having two Hammers, seeing that one sufficeth, having one end of a hands breadth, and smooth, and the other end round.

The way of making the Covers of the Tests, which are called Muffles.

First, a Type or Mold is to be made of Wood, answering to the bigness of the Test, but not with one Handle, as those are made for the purifying of silver, but with two oblong Necks, and without Chaps or Chinks, which otherwise are wont to happen, that so the Cover may remain entire. Then to this wooden Mould the Earth is to be applied, and the Cover to be wrought in the usual manner.

Of the Figure of the Furnace.

The Furnace is so to be built, that it may have within-side the space of an hands breadth all round the Test from its Walls, for Coals, the Test standing in the middle; so that the magnitude of the Furnace is to be proportionable to that of the Test, and may be either round or square, provided it be built with good Bricks, or fit Stones, and Lute, or Earth rightly prepared. There ought to be at least a span between the bottom and the grate, which also ought not to be fastened to the Furnace, but standing upon four Feet, that it may be taken in and out by the foreside of the Furnace (when need requires) being alwaies open. Let the Furnace rise above the Grate the heighth of a span, being every way close, having no door. Upon this heighth of a span a hole is to be left of an hands breadth and heighth, by which the Test may be inspected, and the mixed Metals put in and taken out, and the Fire may have its passage. NB. But if the Test should be above a span over, which would also cause the Furnace to be the greater; then that hole being too little, would not allow a sufficient passage for the Fire; therefore the hole is to bear a due proportion to them. From this hole, nourishing the Fire by its ventilation, the Furnace is yet to be carried up the heighth of two spans, to its upper hole or top, where the Coals are to be put in. Moreover, an Iron Cover is to be made with hollow Superficies, with Iron Buttons, or little Knobs infixed, by which the Lute being put on, may stick fast; the Convex or upper part of the Cover must have a Handle, by which it may be lifted up when the Coals are to be put in, and afterwards put down again to shut the Furnace. *See the Figure of this Furnace, in all its parts, at the beginning of this* Continuation of Miraculum

Mundi*, noted at the top with* *Pag. 62**.*

A, *The Furnace, as it is working.*
B, *The lower part of the Furnace open.*
C, *The upper part of the same.*
D, *The Grate.*
E, *The Hearth or Test.*
F, *The Muffle that belongs to the Hearth.*
G, *The Cover of the Furnace, with which it is to be covered when the Coals are in and at work.*
H, *The Vent for the Smoak.*

When you will work with the Furnace, first put in the Grate, and upon it the foot or prop made of firm Lute, and upon it the prepared Test, and upon the Test its Cover or Muffle, the foremost neck of which ought to come close to the hole on the foreside of the Furnace, and the hindmost neck to touch the back of the same. The foot also which supports the Test, ought to touch the fore-part of the Furnace, that the space between the Test and the Wall of the Furnace, may be well stopt or closed. Also, if the neck of the Cover or Muffle doth not fit close enough to the foremost Wall, the joints are to be well closed with Lute mixed with Hair, that the Fire may have no passage by them, but may pass through the hindmost neck of the said Cover, and under the Cover it self into the Test, and thence out of the foremost neck. If the Fire shall have any other passage by the foremost neck, the heat will not be Sufficient to melt the Metal. Therefore the chief Artifice concerning this thing, is the building of the Furnace in due form and proportion. An Iron door is to be fitted to the Furnace under the Grate, for the governing the Fire, by which it may be encreased or diminished, as need shall require. And the other hole in the superiour and fore-part of the Furnace, by which the Metals are put

in and taken out of the Test, is also to have a door, that necessity requiring, the fire may be governed, and if too great, it may be restrained. To this also a little Chimney or Funnel is to be fitted, which may receive and carry away the noxious fumes of the Metals and Coals, that they may not hurt the Operator. All these things being rightly prepared, the Furnace being well dried, is to be filled with Coals, and to be covered with its Cover, a lighted Coal or two being put next the Grate, the doors are to be shut, that the Fire may kindle by degrees, by which the danger of breaking the Test, and its Cover, the Muffle, by a sudden heat, may be avoided. The Furnace, Test, and Muffle, being all red hot, the Metals (*viz.* the Gold which is to be augmented, and the Copper and *Regulus* of Antimony, from which the augmentation is expected) are to be put upon the Test with an Iron Ladle, the great door below, and the little one above, are to be opened, that the Fire growing more powerful, may forthwith melt the Metals on the Test, which being rightly melted, a little dry Salt-petre in powder is to be cast in upon them with an Iron Ladle, which will presently change a portion of the melted matter into a Scoria: When it flows no longer, but ceaseth from operating on the Metals, lying upon them like Dross, a little more Salt-petre is to be cast upon the melted Metals, which will again change part of them into Scoria. This Injection of Salt-Petre is to be continued so long, until the Scoria shall be no longer hard, but remain liquid like Water, which is a sign that the Salt-petre hath abstracted the Copper and *Regulus* of Antimony from the Gold, and its operation to be finished. And so much *Regulus* of Antimony and Copper is not to be put upon the Test, [I believe the word *not* is an errour of the Printer, in the Copy, and ought to be

left out] that it, when a due portion of Salt-Petre shall be added, may be full to the brim, and the Coals not be burnt out in vain, in the empty Test, which is well to be noted. The fluid Scoria of the Salt-Petre, Copper, and *Regulus* of Antimony, are so long to be kept in Flux upon the Gold, as you think the Test can suffer it; for by how much the longer the Gold shall remain in its Flux, under these Scoria, so much the more of spiritual Gold it will attract from them, and render it corporeal; and the Gain will be so much the greater. Nevertheless, for the greater certainty sake, after the Scoria have lain ten or twelve hours in Flux upon the Gold, they may be taken out of the Test, to see whether the Test be yet strong enough to sustain them longer in flux, because in a continual flux they are wont to attenuate and perforate the Test with holes, especially if they were not prepared of good Earth, which is able to endure the Fire. Therefore, if you find the test yet strong and thick, and not perforated with holes, you may again add the Scoria to the Gold lying in the test, and keep them so long in flux, as you think the test will hold good. When the Scoria condense themselves, and flow with difficulty, a little fresh Salt-petre is to be added, by which being reduced to a thinner flux, they may give nourishment and encrease to the Gold, which in this operation hath the place of a seed, as the Copper and *Regulus* of Antimony supply the place of the earth, by affording aliment and augmentation to the Gold; the Salt-petre is in the stead of Rain, which moisteneth the Earth, and rendereth it fruitful; therefore by how much the longer the Gold lieth and groweth in this Earth, so much the more encrease it obtaineth. After the test is no longer fit to bear the fire, or you would leave working, open the lower door of the Furnace, and take off the Cover from the

top, that the heat of the fire may be diverted from the test, and the Scoria grow thick, and the Gold under them hard, draw out the Scoria by degrees with an Iron Hook, from the Gold, that it may remain in the test intire, and in one compact Mass, and not be mixed with the Scoria, like Grains, and occasion loss. All the Scoria being taken out, the Gold is to be freed from the test with a thin sharp-pointed Iron, then taken out with the tongs, and weighed, to see what encrease it hath got.

NB. That as long as the Test keeps firm and good, it were better not to take out the mass, but to be left upon the Gold in continual flux. This is a Labour not to be despised, seeing that the first Coals being burnt out, more are to be added only; so that this operation may be continued for some daies, without intermission, provided the Tests be well made, which also ought to be done if you expect any profit; of which you need in no wise doubt, if the operation be rightly instituted; especially if the Antimony and Iron, of which the Regulus is made, be good: For the more Gold the Antimony, Iron, and Copper shall contain, the more volatile Gold the fixed Gold which is melted under them, will attract to it self. But if you want such Metals as are rich in Gold, and are forced to be content with the common, the Gold will nevertheless get an encrease in the Operation. NB. When Metals containing Gold are to be had, there is no need to keep the first *Scoria* in so long a flux upon the Gold, seeing that presently after the Copper and Regulus of Antimony shall be turned into Scoria by the Salt-petre, they may be removed from the Gold with an Iron Hook, and new Metals forthwith added, and again reduced into Scoria by the Salt-petre. This labour of removing the Scoria, and adding fresh

Metals, being long continued, will add the greater encrease to the Gold, because Copper, Iron, and Antimony contain much corporeal Gold, which in their reduction into Scoria, associateth it self with the Gold. Therefore when those Scoria are withdrawn, and new Metals added, it cannot be, but the encrease of the Gold must be greater than proceedeth from the first Scoria, in which only the spiritual Gold is rendered corporeal. The addition of fresh Metals, and the abstraction of the Scoria repeated 10, 15, yea 20 times a day, must necessarily give a great encrease to the Gold, if the Metals contain both corporeal and spiritual Gold. The abstracted Scoria may be reduced in a Test of the same Furnace (of which Tests there ought to be many in readiness) and the Copper and Regulus precipitated from them, and put to other uses, of which my other Writings every where make mention. And they are precipitated by the Powder of Coals, or Antimony. The way of precipitation is this; the Salt-petre hath absorbed the Sulphureous Metals, *viz.* the Copper and *Regulus Martis*, and changed them into Scoria. Now, if to these Scoria some other Sulphur be injected, which the Salt-petre coveteth more than the Copper and Regulus of Antimony, it layeth hold on that, by which those Metals which it had first absorbed, are dismissed, and fall to the bottom. But the Regulus and Copper cannot be so separated by precipitation, but that somewhat of them will yet adhere to the Salt-petre. These may be fixed together, that they may render Gold again in fusion, or the fixt Nitre may be extracted from the Scoria, with Rain-water, to be used for other Labours; as shall be taught hereafter. The residue of the Scoria will be yet of use to Potters, to glaze their Earthen Vessels. But if the Scoria and Salt-petre be not

separated, but left together, they may be used with greater profit for the making of Salt-petre, or for the dunging of Land (of which we shall presently speak) than if they be separated. The manner of doing these things shall be described in their order. But first it seems good to me to exhibit a proof, by which every one may know the certainty of this matter, *viz.* that this work doth not only afford a profit to the Operator, not to be contemned, but also that the Gold doth obtain a true and certain encrease from the Copper and Regulus of Antimony, whereby the Work may be undertaken with the greater boldness and confidence; which I thus demonstrate. Take a small piece of silver, freed from its gold by *Aqua fortis*, that you may be sure there is no Gold in it: to which, in fusion, adjoin so much Copper and Antimonial Regulus, as being reduced into Scoria by Salt-petre, and again separated from the silver, may leave it malleable and ductile. This being dissolved in *Aqua fortis*, will leave at the bottom undissolved a reddish powder of gold, which it hath attracted to it self from the Copper and Regulus of Antimony. Now, so much as there shall be of this Gold, so much and no more corporeal Gold did the Copper and Regulus contain, which the Silver hath absorbed. The Scoria possess no more corporeal Gold, but yet abound with spiritual, which you may find by the following Experiment. Cover those Scoria put into a new Crucible with Powder of Coals, and set the Crucible into a small Wind-Furnace, that they may melt. In this melting, the Nitre will rather enter the Sulphur of the Coals, than that of the Metals; and associating it self to that, dismisseth the Copper and Regulus. Which being done, pour out the melted Mass into a Cone, and when it is cold, separate the Regulus separated to the bottom, which will be the same

Copper and Regulus of Antimony which the silver hath deprived of their corporeal gold; which is demonstrated as followeth: Take a bit of Silver, cleared from its Gold, which join with the said Regulus by melting, and reduce the melted mass by Salt-petre into Scoria, as before, pour the mass into a Cone, and being cold, separate the Silver. This being dissolved in *Aqua fortis*, leaves at the bottom no reddish powder, as the first silver did. By which it clearly appears, that the Copper and Regulus of Antimony had yielded all their corporeal Gold to the Silver in fusion, which nevertheless can afford no gain, except the Labour be many times repeated with fresh Copper and Regulus. But because this repetition is wont to require no small quantity of Copper, Regulus of Antimony, and Salt-petre, to bring the silver to a golden nature; and moreover, every one knoweth not how to make profit of the Copper and Regulus, deprived of their Gold, or to put them to other uses, and that Salt-petre is not seldom sold at a great price, no great profit can accrue by this Labour to such. Nevertheless, they will obtain no small gain, who after the extraction of the gold, know how to use the Copper, Antimonial Regulus, and Salt-petre, which I have shewed in many places of my Writings. But those Metals being melted with Gold, and turned into Scoria by salt-petre, bring far greater profit than when wrought with silver. For somewhat of the silver is consumed, as well as somewhat acquired by it; but nothing of the gold is lost, if the Crucible be firm, that nothing run out. NB. If any gain be expected from silver, such Iron, Antimony, and Copper are to be used, as are pregnant with Gold, and to be often abstracted from the silver, and the metals themselves afterwards to be put to other uses, bringing profit, to say nothing of the Salt-petre,

which may be made at a far cheaper rate (that it can be bought) by those who seek profit from Silver. I have instanced these Experiments, to demonstrate that every Copper, and every *Regulus Martis* contain somewhat of corporeal Gold, and being reduced into Scoria, do yield it to the adjoined Gold or Silver; and that nothing more can be extorted from them, except being reduced into Scoria by Nitre, they be for some time kept in Flux upon the silver, or Gold which is better, that their spiritual Gold may insinuate it self into the corporeal, and augment it, which the following Experiment sheweth.

Take of Copper, and Regulus of Antimony, deprived of all corporeal gold, by the addition of other gold, what quantity you will, melt them with gold, and convert the Copper and Regulus into Scoria, after the usual manner, with *Salt-Petre*, which keep in Flux upon the Gold for 6, 8, or 10 hours, and then pour all out into a Cone; the gold being separated from the scoria, and weighed, will shew what it hath gained in this operation. This encrease from the twofold matter added, *viz.* the *Copper* and *Regulus Martis*, is profit; which notwithstanding proceeds more from the one than the other, as this Experiment will prove. Take one part of silver, which holds no gold, and one part of *Regulus Martis*, being melted in a Crucible, reduce them, as hath been often said, by salt-petre, into scoria, and being well melted, pour them out into a small Ingot; which when cold, separate the scoria from the silver with a Hammer; the silver will be pure white, and of very easie fusion, but will contain nothing of gold. NB. If to the silver and Regulus of Antimony, you shall also add Copper, and then turn all into scoria by the help of salt-petre, and when well melted, pour them into an Ingot, so that the scoria flow upon the silver. This

silver being separated from the scoria with a Hammer, or by lying a while in water, you shall find that part which was covered by the melted scoria, to be all over so gilt, that you can scarce rub it off with your fingers, which Gold hath adjoined it self to the Silver, chiefly from the Copper. For if more Gold had proceeded from the Regulus, the melted Silver would also necessarily have been gilded by that, which yet without the addition of Copper is not wont to be. Nevertheless, let no man perswade himself that the Regulus of Antimony being omitted, the same augmentation would happen, because the greatest part of the Gold proceeds from the Copper. For without the Regulus, the Copper would not suffer it self to be reduced into Scoria by the Salt-petre; so that necessity requireth, that all those matters should be conjoined in the said manner, to acquire any profit.

Here thou hast, benevolent Reader, Specimens sufficient for the trying the truth and certainty of this thing: It's free for every man to enter upon the prescribed way with greater and longer Operations, that he may attain the desired profit.

What I have many times said, I say again, That this Operation is true, and brings great profit, provided it be instituted in a due manner. The Salt-Petre is the chief thing required in this Operation, which he that knows how to prepare with small cost, and understands what I have written, may boldly undertake the Work; but he that must buy it at a dear rate, I will not advise to meddle with it. He that cannot understand what I write, 'tis better for him to spare his labour and charge, and employ himself in those things which do not exceed his capacity.

It behoveth me now to shew the use and benefit

which the scoria which are left in this Operation are of, that there may be no waste or loss. But the quantity of scoria in this Operation will be more or less, according as it shall be exercised. If good Antimony, Copper, and Iron, which contain corporeal Gold, may be had in plenty, and Salt-petre also cheap, the loss will not be great, if the scoria should not be altogether put to the best advantage. For if there be enough of the Copper, *Regulus-Martis*, and Salt-petre to be had, they are to be reduced into scoria, flowing upon the Gold, that with it they may leave the Gold contained in them. But here no regard is had to the spiritual or fugacious Gold which they contain, which is laid aside with the scoria, and new Copper and Regulus is put to the Gold, and the scoria again laid aside for other uses, so that in one and the same day, this labour of adding new matter, and as oft separating the scoria, may be repeated ten or twelve times. Whence it comes to pass, that the Gold is every time inriched, and attracteth more corporeal Gold from those matters in one day, than it could do in fourteen daies, if they contained only spiritual Gold. But on the contrary, a great quantity of Copper, Regulus, and Salt-petre are required for this labour, which if they cannot be had cheap, the charge will be the greater, seeing that those Metals which are pregnant with corporeal Gold, will abundantly compensate the charge, especially if benefit be made of the scoria, which we will presently shew. But if a quantity of the said matters be wanting, and vulgar Antimony and Copper be used for the extracting the spiritual Gold only, there will not be made so many *Scoria*; but it sufficeth, that the first scoria be left so long in flux upon the gold or silver, until they have yielded some augmentation to the same. And in the mean time, the addition of no

other thing is required, but Salt-petre, of which a little is to be injected to the hardened scoria, to render them more fusile, and to cover the Gold the better with their flux. This way will not cost so much, besides a good quantity of Coals: Nor will the Work it self be so troublesome, seeing that it need be inspected only once in two or three hours, and any Boy may govern the fire. Or if the Furnace be so built, that (like a dull *Henry*) the Coals constantly sliding down, the fire may feed it self, the Operation may be continued night and day without any looking after. In the working the other way with Metals containing corporeal Gold, there is more labour and care, seeing that every hour the scoria ought to be removed, and new metals to be added. Therefore every man may chuse that which is most convenient for him.

Moreover, where neither Antimony, Copper, or Iron abounding with corporeal Gold, are to be had, the Operation may be instituted in another manner, and applied to the making of salt-petre in abundance, and with small costs. For after the Regulus and Copper, in flux upon the gold, are reduced to scoria, they are not to be removed, as otherwise they are wont, but the Copper with the Regulus must be precipitated from the Nitre, by the Powder of Coals, in which precipitation the gold taketh to it self the metal reduced into scoria, so that the fixt Nitre only is to be removed, which is afterwards to be put to other uses: And the Copper and Regulus, by the addition of new salt-petre, are again to be reduced to scoria, and to be precipitated from the Nitre by the Powder of Coals, and the Nitre again removed. So the Copper and Regulus will alwaies remain in flux upon the gold in the Test, and nothing but the added Nitre will be every time

separated.

NB. This Labour doth not indeed draw forth so much gold as that which hath new metals added every time to the gold; but yet it excelleth that in which the Metals are kept in a continual flux upon the gold, without the addition of new; for as often as the Copper, with the Regulus, are burnt by the Nitre, so often the Nitre burneth and consumeth somewhat of their superfluous sulphur, and by how much the more the combustible sulphur is burnt and consumed, by so much the more the spiritual gold in it is dissolved, and adjoineth it self to the corporeal gold, to get it self a body.

And this is the difference of those Operations, of which a man may chuse which he pleaseth, or rather that which fits the matters, he hath at hand. Whichsoever he shall undertake, it will afford a profit not to be slighted, especially if he pay not too dear for his Nitre, or can make it himself at a cheap rate.

How Profit may be made of the Scoria *which remain after this Operation.*

It behoveth the studious of Art to know, that there is a difference in the scoria removed from the gold by the forementioned Operations. Those which are removed from the gold only remaining in the test, and in which the Nitre, Antimony, and Copper remain mixt, are metallick, from which the Copper and Regulus may be precipitated and separated, by the casting in of crude Antimony or Powder of Coals. The scoria from which the Metals are already precipitated in the test, are nothing but fixt Nitre. The scoria also differ, in which the Metals are precipitated by Antimony, from those which are precipitated by Coals; those

partake more of sulphur, these less; for the sulphur of coals differs in its nature from the sulphur of antimony, and requireth that a difference be observed, and that either scoria being put to its due use, it may bring the desired profit. And this is the difference: When the Copper, with the *Regulus-Martis*, is precipitated by coals, that the Copper, with the Regulus of Antimony, is precipitated, but the Iron which was in the Regulus admitteth not of precipitation, but remaineth in the scoria; whence it comes to pass, that the Regulus, after precipitation, is found to be lighter than when it was put into the Crucible. Therefore what the precipitated Regulus hath lost, necessarily remaineth in the scoria; for which cause those scoria are of more hard and difficult fusion than those which remain after the precipitation with Antimony: For when the metals are precipitated by the casting in of Antimony, to one pound of scoria, an ounce, and sometimes more, of Antimony, is cast in, which precipitateth all the Copper and the Regulus attracted by the Nitre, and giveth a more ready fusion to the scoria. But nothing more plainly sheweth the difference, than the pouring of water upon the scoria, to make a *lixivium*. The scoria upon which the coals were cast, yield a clearer and sharper *lixivium* than those on which Antimony was cast. On the contrary, the Antimonial Scoria, by reason of the Antimonial combustible sulphur, are of a drier nature and property.

The best thing in both the scoria, is the fixt Nitre, which is to be drawn out of them by Water, and may be put to various uses, with no small profit.

In the first place, from those scoria a good Medicinal Tincture may be drawn by the affusion of spirit of Wine, of which mention is made in divers

places of my Writings. Those scoria far excel all Dung, and also common salt-petre it self, in promoting of vegetation. Nevertheless, they are first to be made more temperate, because they are too fiery to be used alone. They also effectually promote the augmentation of Gold, and also the health of the humane body, by their most pure Essence extracted by the spirit of Wine.

They may without injury be called *The Philosophick Dung*, because they augment the growing power in Vegetables, Animals, and Minerals, neither in Operations of this kind is there any Equal in the world.

Their smell is like that of humane Excrements; nor are they unlike to them in Aspect, but most efficacious in their use. There are many things of great moment yet lie hid in them, all which it is not for me to describe. Those things which I have hitherto written, I have often done with my own hands, and proved by many Experiments. What I deliver is not from hear-say, or the reading of others Books, being resolved to publish those things only, which an infallible Experience hath taught me, so that every man may boldly, and without any doubting, give credit to them.

Moreover, this fixed Nitre is endowed with the same virtue with other strong *lixiviums*: Nevertheless, it is more efficacious than that of any common Wood, inasmuch as Nitre exceedeth the fixed salt of Wood in its maturity. The residue of the scoria from which the *lixivium* is extracted, serveth for the glazing of earthen Vessels.

He that desireth to know more of fixed Nitre, may find it in my *Furnaces*, as also in my *Pharmac. Spagyric.* and especially in *The Explication of*

Miraculum Mundi; where he will meet with many things worthy of admiration. For the Philosophick Dung, see the 35 Article of *The Explication of Miraculum Mundi*, my Apology against *Farnner*, and the Description of my Press for Wood, in this Treatise; in which places he may find those things which will abundantly satisfie him. Concerning this Universal (tho' contemptible) subject Nitre, we will treat more, God willing, in the following second part of *Miraculum Mundi*.

Here we have shewed the well-minded Reader, how by this one only Operation, he may encrease or augment his Gold, inrich his Fields with a fruitful soil, and preserve his health; so that there will be none who may not receive profit from it.

I cannot but here commemorate what some time happened to me in this Operation. When the Copper and *Regulus-Martis* were mixed by melting together, and reduced into scoria by Nitre, the matter thence proceeding was wonderful, appearing in variety of fair Colours, emulating a Peacocks Tail. Therefore when I saw such various colours, I presently thought with my self, whether that matter might not be fit for making a Tincture, which might change the imperfect Metals into Gold; seeing that I had read in some Philosophers, that there is more Tincture in Iron and Copper than in Gold, which gave me an occasion of considering whether this conjunction of *Mars* and *Venus*, might not be the Adultery spoken of by the Poets, or rather the Vitriol of the Philosophers; for this matter retaineth a very fair greeness, not only in the fire, but also out of it, as well wet as dry. Whence I began to perswade my self, that Iron was the Gold of Philosophers, Copper their *Luna*, and Antimony their *Argent-vive*, and Nitre

to perform the Office of a *Solvent* or Bath, in which they are dissolved and digested. Being moved with all these things, that I might make a trial, according to my simplicity, I put all the said matters into a Glass, and committed it to *Vulcan*, (or the Fire) which being administred by degrees, all the matter passed together into a black colour; to which a very fair greenness, with variegated colours resembling the Tail of a Peacock, succeeded, which continued in the fire for some weeks. But seeing that it would not at all be changed, I being wearied with the tediousness, took the fair matter out of the glass, and put it into a Crucible, which I set in a Glass-makers Furnace, that I might perform this Operation with the less Labour: And after three daies I again took it out, and I found all the matter changed into a glass of a bloody colour, but not transparent. The Crucible being broken, I found in the bottom a little Regulus of an Iron-like colour, which being tested with Lead, yielded white Silver, which being dissolved in *Aqua-fortis*, left no Gold at the bottom. Being strook with admiration, I began to think whence that Silver should proceed, seeing that I did not expect Silver, but Gold; at length being satisfied in that, I was of opinion, that from this subject by one and the same labour, might be made both a red and a white Tincture; but I have not hitherto had time and opportunity to try the truth of the matter experimentally. Whatsoever I have here written, is only that I might afford matter to others who are desirous of seeking, by whose diligent searches some good may be obtained. This Admonition I also think necessary, That they who endeavour to bring any subject to a constancy in the Fire, by fixing, as the Chymists call it, that they lute and close well their Vessels, lest the Air (which is a great impediment to

the Operation) should hinder the Work.

For Example. A Wood-coal, for the greatest part, consisteth of a fugacious and immature Sulphur, mixt with a few fæces, being put into an open Crucible, and set in a small Fire, it is presently burnt, and being all consumed, leaveth nothing in the Crucible, but a few Salt-ashes; but being put into a Crucible well closed and defended from the Air, and committed to a great Fire, and therein kept for many years, yet would lose nothing of its weight, colour and body, but would remain a black Coal, without any alteration. But on the contrary, if any Mercurial salt be added to the Coal in a due weight, and be enclosed with it in a crucible but one day, and kept in the fire, the coal will be changed into a red, fiery, heavy stone, more Metallick than Vegetable, whose admirable Virtues the Tongue cannot declare. Seeing therefore that from any fugacious and volatile Vegetable in so short a time a constant fixed thing may be made by Art, Why should not the same be made much better of some Mineral or Metal, which is much nearer to Fixity? And although these coals black the hand, nevertheless they contain much good, which he that knows how to come at, will by the same easily make his hands white again, and draw that from it which is more conducive to the health of Man's Body, than from all the costly and fading things in the whole World. *A Word is enough to the Wise.* Although I have here shewed, that sulphurated Nitre is a true Medicine for Animals, Vegetables, and Minerals, yet I would not be understood as if I affirmed there was no other, which is not my intention, seeing that if this Medicine were to be generally used for Vegetables, it would be too costly, [*and there are other things described in this Book for that purpose, which are far cheaper*] and I have

shewed it only to the end that the wonderful Works of GOD might be manifest to those who are willing to try. For if any one will macerate the seed of any Vegetable in the Tincture drawn from sulphurated Nitre, by the Spirit of Wine, in a warm Bath, he may from that macerated seed produce a growing Herb, in a few hours space.

A Tincture of this sort will effect more in curing of Diseases, than a whole Apothecary's Shop. But he that knoweth how to join some spiritual Gold with this Tincture, that the Gold may thence attract to it self nourishment and encrease, as a Vegetable doth from the Earth, will easily obtain a Universal Medicine. But if any think that I mean such a Medicine as changeth the imperfect Metals into Gold, in flux, he is mistaken, for that is to be attributed to the Stone of Philosophers only. But I call it Universal, as it is the chief Medicine of Animals, Vegetables, and Metals, which I intend alwaies to keep by me, ready prepared, that I may render others partakers thereof. I intend also this Winter to prepare a great quantity of the Universal Medicine for Vegetables, by the benefit whereof Grain may be made to grow in meer Sand, that so this Invention may become profitable to many men, provided they will but undertake the work: Not that I intend to prepare this of Nitre, which is too costly for the Dunging of Fields. For common Salt, which is abundantly cheaper, in a few hours, may be so changed, that losing its corrosive Nature and Property, it becomes plainly like Nitre in taste, figure, and virtue, but not inflamable, and excelleth the Dung of Cattel for dunging of Land. Neither let any man fear that this Preparation of common Salt requireth much labour or trouble, or is difficult to be done; for he that shall see the Operation but once, will easily be able to

understand and imitate the same.

Hence, seeing that in all places there are many barren Fields to be found, it cannot be, but that great profit may be acquired by it.

Arcanum III.

A Gift offered to all diligent Physicians.

The profitable use of Salt-Petre*, in the Concentration of* Metals*, and Preparation of Excellent* Medicines.

Although in the First Part of *Miraculum Mundi* I have described divers concentrations and emendations of Metals; nevertheless in those there is nothing common with that *Arcanum*, which I intend here to describe. For those *Arcana* concern only the emendation of the imperfect Metals; but this also treateth of the Preparation of many excellent Medicines.

The manner of concentrating and amending of Metals by Nitre.

First, a Man is to be made of Iron, having two noses on his head, and on his crown a mouth, which may be opened, and again close shut. This, if it be to be used for the concentration of Metals, is to be so inserted into another man, made of Iron or Stone, that the inward head only may come forth of the outward man, but the rest of his body or belly may remain hidden in the belly of the exteriour man. And to each nose of the head, glass receivers are to be applied, to receive the vapours ascending from the hot stomach. When you use this man, you must

render him bloody with fire, to make him hungry and greedy of Food. When he grows extreamly hungry, he is to be fed with a white Swan: When that Food shall be given to this Iron man, an admirable Water will ascend from his fiery stomach into his head, and thence by his two noses flow into the appointed Receivers; a Water, I say, which will be a true and efficacious *Aqua-vitæ*; for the Iron man consumeth the whole swan by digesting it, and changeth it into a most excellent and profitable Food for the King and Queen, by which they are corroborated, augmented, and grow. But before the Swan yieldeth up her spirit, she singeth her Swan-like song, which being ended, her breath expireth with a strong wind, and leaveth her roasted body for meat for the King, but her *anima* or spirit she consecrateth to the gods, that thence may be made a *Salamander*, a wholsome Medicament for men and metals.

This manner of operating, by which metals are wont to be concentrated, I was willing to describe in this Enigma, that it may be known to be no Fable, but that the same manner hath been described by other Philosophers before me. This appears from the sixth Key of *Basil*, where he delivers the like manner. *Basilius* writeth concerning *Salt-Petre* speaking of it self; *When my End is threatned, &c.* From which words it is manifest, that he used the same way for the particular and universal emendation of Metals, as also for the preparing of excellent Medicines. But because this Enigma is a little too obscure for the unskilful, I think good to interpret it word by word.

The Iron man is the destilling Vessel, which I have described in the Second Part of my Furnaces. This is put into another Iron or Stone Furnace, and the fire

under it. To the noses or pipes of the upper part, some Receivers are to be so applied, that at least three Glass-Receivers may be applied to one nose, the first of which is to be firmly luted to the nose; the second must enter the perforated belly of the first Glass, by a Pipe; and in like manner the third must be inserted into the belly of the second; the Pipe of the second Glass, which entereth the belly of the first, is to be well luted; the third is not to be luted to the belly of the second, but to remain open, that the expiring gass may go out of the second into the third. To the other nose also three or four Receivers are to be applied after the same manner, but so that the last may reremain unluted. The white Swan is the *Amalgama* of Tin and *Argent-vive*, to which Nitre is added; and it is done as presently you shall hear. [*See the Figure of this Furnace, before the beginning of this Treatise, noted with* pag. 96.]

A *is the Furnace.*

B, *The Vessel in the Furnace.*

C, *The Hole with an hollow Verge, through which the Swan is conveyed into the Vessel.*

D, *The Tongs holding the Cover with which the Vessel is to be covered as soon as the Swan is put in.*

E, *An Iron Ladle, wherewith the Swan is put into the Vessel.*

F, *The Receiver.*

G, *The Bench that supports the Receiver.*

H, *The Laborator.*

R. one part of Tin, melt it in a Crucible, when it is melted, take the Crucible out of the Fire, and pour out the melted Tin into another earthen Vessel, and mix therewith one part of *Argent-vive*, which will presently be absorbed by the Tin, but the Tin will become so brittle and friable, that it may be ground

upon a stone to fine powder. With this fine powder mix two parts of good and pure *Salt-Petre*, by grinding them well together, till the *Amalgama* cannot be known from the *Salt-Petre*, but one white powder be made of both. This powder is *The Swan of Basilius*, of which he prepareth Meat for the King; but I call it *The Fulmen of Jove*, by which all Metals are destroyed and reduced into nothing. And from this nothing, Metals much better and more noble are generated *de novo*. Concerning this destruction and regeneration of Metals, consult *Paracelsus*'s Book of *The Vexation of Alchymists*, and the Third Part of my *Mineral Work*, and you shall find, that *Paracelsus* hath involved this Operation in obscure words, as also *Basilius*, who delivereth the same in his sixth Key, with the same obscurity, which here, without any covering, I have openly and clearly made manifest.

NB. I would have the studious of this Noble Science know, that *Jupiter* alone, or Tin mixt with Glass only, in this artificial destillation by the fiery man, yields that medicinal spirit, without the addition of *Argent-vive*, and leaveth the meat or augment of ☉ and ☽ in the bottom. But that our Ancestors have adjoined *Mercury* or *Argent-vive*, I also by experience have found it profitable. But it is chiefly done for this end, that the Tin being rendered friable and fit for grinding, may the better be mixed with the Nitre; for it would be laborious and troublesome to file the Tin to mix and destil with the Nitre, as *Baptista Porta* teacheth in his Natural Magick. This reduction into Powder by Mercury, is performed in a very short time, and wonderfully promoteth the Labour, whilst the Mercury acting upon the porous Jupiter, penetrateth him, and rendereth him compact. On the contrary, *The Fulmen of* Jove burneth the wings of Mercury, and maketh

him remain stable, so Jupiter is an help to Mercury, and Mercury to Jupiter, and both become more noble by the power and efficacy of Salt-petre; for Jupiter possesseth much combustible sulphur, which nevertheless burneth not *per se*, without some help; in the effecting of which *Salt-Petre* is a Master, having neither superiour nor equal. Well doth *Basil* say, that sulphur only is Nitre's best Friend, and also its worst Enemy, which we have found to be most true, in this operation.

When the Tin and Nitre grow hot together, they take Flame like Gunpowder; the purer part, like some subtile spirit, vanisheth into the Air, and the more fixed, stable, and better remaineth at the bottom; for the noxious and superfluous Sulphur of the Tin is burnt by the Salt-Petre, which being separated, the rest of the Tin acquireth a more compact and better body. The Mercury also adjoined in this operation, yieldeth whatsoever good he hath, offering his Spirit for Medicine, and his Body for the encrease of Gold or Silver; so that more profit accrues by the addition of Mercury, than if Jupiter were fulminated by Nitre alone. Very few will believe how noble a Sulphur there is hid in Jupiter, which can be made manifest by Nitre only. Truly Mercury can by no way be better deceived and overcome, than by the Fulmen of *Jove*, which casts a terrour upon all the gods. Therefore they are very wary, lest they be touched with that Thunder, and slain with sudden death. If Jupiter were destitute of his most efficacious Thunder, neither his father ♄, nor ☉, nor ☽, with the rest of the gods, would be subject to him. Mars, Venus, and Mercury would only sport themselves with him. Mars would shew him his Sword, ♀ would intangle him with her amorous Net, and ☿, the deluder of all dreaming Alchymists, would fly away,

and laugh at him. *Volens nolens* they all fear Jupiter, and must allow him the Empire; the conversation of *Iove* is perilous to all the Metals, even as it often brings subjects into no small danger, to converse with their Prince. Hence the vulgar Proverb, *Procul a jove, procul a fulmine*; He that keeps from the fire, is not in danger of being burnt.

But leaving those things, we will now address our selves to the operation it self, and plainly shew how it is to be performed. And first, let the studious know that this Work requires a diligent and skilful Operator; but he who knows not how with skill to handle the Fire, I advise him to abstain from this Work. The Art is true and excellent, so that he that understands but a little, may see the whole Work to stand upon a firm foundation drawn from Nature. He that knows the nature of Metals and Minerals, knows that the goodness and perfection of Gold and Silver, the best of Metals, consists in a stable, fixed, and incombustible matter, and on the contrary, that the imperfection of the imperfect Metals, proceedeth from a combustible and stinking Sulphur only; which superfluous Sulphur, if it shall be any way separated from them, that which remaineth, ought necessarily to be purer, more fusible, and constant in the fire. There are many waies by which that superfluous and combustible Sulphur is separated from Metals; of which mention is made in the Mineral Work, and the fourth part of Furnaces. In this operation, the manner of separating it by combustion, is performed by Nitre. In this Treatise also other waies are indicated, yet Nitre is to be used in them all.

But the studious of Art ought to know that in this Operation, not only the superfluous Sulphur of Jupiter and ☿ may be separated and consumed by

burning and each Metal concentrated and amended, but also to both, or to ♃ alone other Metals may be added, and by the help of Salt-petre may be fulminated and concentred; for the Fulmen of *Iove* doth not only concenter and amend his own proper body, but also other Metals adjoined to him. Nor do I know a nearer way of destroying Gold and Silver quickly, than the Fulmen of *Jove*, which so destroyeth all the Metals, that afterwards without the addition of other things, they cannot by any force of fire be reduced to their former fusile bodies, inasmuch as in melting *per se*, they alwaies pass into Glass, every one being tinged with that colour which is proper to the metal. Gold is changed into a very elegant glass, like to a *Ruby*; the glass of Silver hath the colour of a *Chrysolyte*; the glass of Copper hath a green and red colour like a Jasper; the glass of Mars differs not much from it; the glasses of Tin and Lead remain white. These Glasses being (by an artificial reduction) reduced into their bodies, are much better and nobler than they were before. This sudden fire also clippeth the wings of Mercury, so that part of him is constrained with the ♃ to abide the fire. That swift fluxing powder which is compounded of Nitre, Tartar, and Sulphur, mentioned in the second part of my Furnaces, is also not to be contemned, for when that mass is mixed with ☿, and kindled by a live Coal, the ☿ is altered, as when it is to suffer the fire, it maketh a cracking noise, till it breaks through the fire, but being apprehended by the Fulmen of *Jove*, it hath no time allowed it to cry out; for when it beginneth to feel the heat, it singeth a Swan-like song, but before it can break out from the Fulmen it is killed. *Basilius* calleth this *The Song of the Swan*, alluding to what the Ancients have delivered concerning that Bird, *viz.* That when she is old, and

ready to die, she sings a song, which being ended, she presently dieth. This Saying the vulgar believe of that Bird, which yet is false, seeing that I never yet heard any man say that he had heard the Song of a dying Swan. The ancient Philosophers hereby meant our Metallick Swan. But let any one enquire, whether the *Amalgama* of ♃ and ☿ may be compared with a Swan; because it may every way be broken, within and without, it is like to the Feathers of the said Bird, and therefore the Philosophers have not unfitly called it a Swan. As for its singing, it is thus; When the *Amalgama* is mixt with Salt-Petre, and wrapt up in Papers, and one after another of them cast into the Iron man, the ☿ with the ♃ beginneth to sing a Song like the fine Note of some Bird, which endureth no longer than the crowing of a Cock, seeing that the flame presently followeth, which maketh the separation.

But that any one may be more certain of this matter, I will openly and clearly expound the Operation word by word.

R. of Tin and ☿ each ℔ j. make an *Amalgama*, as I have taught above; grind this with ℔ ij. of pure Salt-Petre, freed from all its fæces, reducing the whole mass into a minute powder, till the *Amalgama* can be no more felt by the fingers. This fine powder distribute into sixty equal parts, more or less, and put each part into a Paper, so that every Paper may contain about two lothones, or an ounce, wrap them up: This quantity is not to be exceeded, especially if the Iron man and the Receivers be not large; for the lesser Vessels require the less of the matter: For the matter being cast into the red-hot Vessel in Papers, when it taketh flame, giveth a crack or puff like Gun-powder, which is kindled with a Coal. The Labour is

easie, which may be called *The Work of Women*, or *Play of Boys*. For as soon as one Paper is enkindled, the vapours ascending with smoak and wind, pass into the Receivers, which being quietly settled, another Paper is presently to be cast in that it may sing its Swan-like Song, and pass into the Receivers in a fume. This casting in of the Papers is so long to be continued till they are all spent. You can scarcely put in above ten Papers, or fifteen at the most, in an hour; for if one Paper be cast in too soon after another, the ascending Spirits of the ♃ and ☿ would not all settle, but some would fly out at the hole of the last Receiver, and be lost. By this means the Iron man is nourished by degrees with his food, *viz.* the white Swan, even as Infants are successively fed by their Mothers.

After all the Papers are in, the fire is to be let go out of its own accord; and when all the Spirits are condensed in the Receivers, the Receivers are to be removed one after another, in which is the *Anima* of Tin and Mercury, and of that metal which was added, of a white or ashy colour, if Tin and Mercury only were used. But if Gold was added, it will be of a purple colour; if Silver, of a yellow; if Copper, the colour will be reddish. And this is not only to be understood of the matter which passeth into the Receiver, but also of that which remains in the bottom of the Iron man. The *Anima* hideth it self in the corporeal flowers which ascend into the Receivers, by which it is the more easily acquired, and which otherwise, perhaps, by reason of its great subtilty, would be very difficult to obtain. If you can put your hand into the Receivers, you may take out the flowers with a bent spoon, which hide the *Anima*; but if not, with an Iron Wier fitted for the scraping them off, or by washing them out with Water, which

are to be handled further, as you shall presently hear.

The mass remaining in the stomach of the Iron man, being taken out when it is cold, hath a fiery nature and a white colour, if it were only of Tin and Nitre, but if any other metal was added, the colour will be varied, as above. This mass cannot be reduced to its former body by Fire alone, how vehement soever it be, seeing that when it is melted, it runneth into glass, and that too very difficultly. Nevertheless, by the following operation it may be reduced to its pristine Body: Put it into a very strong Crucible, which cover, and set in a Wind-Furnace that will give a very strong Fire (such as is my Fourth Furnace) the Fire being raised by degrees, let it be made white-hot, and when it is so, the Cover being a little removed, throw into the fiery mass a little Sulphur, Antimony, or Coals in fine powder, put on the Cover again, and lastly, cover the Crucible over with Coals, that all the matter may flow well. In this operation the combustible Sulphur will enter the fixt Nitre, and separate it from the fixed Metal, and with the same, whatsoever of Sulphur, Antimony, or Coals was added, will be turned into black Scoria. The Tin, with the Mercury, and the Metal, if any were added, separateth it self from the Scoria, and returneth into a metallick body, which after it is poured out and cold, is to be Separated from the Scoria. Jupiter hath the aspect of his former body, but is amended, as the proof will shew him that pleaseth to make it; the remaining Scoria are to be kept, because an excellent universal Medicine may be made of them. The *Regulus* being melted again, is again to be amalgamated with its own weight of Mercury, which *Amalgama* is to be mixed with its equal weight of Nitre, and put up into Papers, and again cast into the

Iron man, as we have shewed before, that the Flowers and *Anima* may be collected and added to the former. The remaining mass is to be precipitated with sulphur, as before, and the Scoria being separated from the Regulus, to be added to the former, and the Regulus to be again brought with Mercury to an *Amalgama*, that with Nitre the Flowers and *Anima* may be again elicited. This Labour is to be so often repeated, until half the Regulus be converted into scoria: That part which remains being examined by the Cupel, will shew how much gold and silver is generated by this Labour. Which profit will serve to buy other Coals and Metals to carry on the Work. The *Anima* which passed into the Receivers yieldeth a most excellent medicine; so do also the scoria which were reserved at divers times, afford one little inferiour to that; and how they are to be handled, we will teach in order. Therefore by this only operation a universal medicine for humane and metallick bodies is acquired particularly, and from the remaining part, an amended metal paying the necessary costs which are required for the continuing the great Work.

How therefore particularly of Tin and Copper often fulminated, one may get a profit not to be contemned, I will clearly shew; forasmuch as I have not performed that labour only once, but many times; in like manner I will deliver the way and mode whereby an excellent medicine may be prepared for the curing of all curable Diseases, which also I have often done. But how a Universal medicine may be prepared of the *Anima* of metals, for humane and metallick bodies, I cannot teach; for I have not hitherto had time and opportunity of perfecting so great a Work. Nevertheless, I do not at all doubt, but that the Philosophick stone may be made of this

Anima: But by what means I think this may be effected, (saving to every man his own judgment) I will not conceal from the studious of the Divine Wonders. What I have done with my hands, I can render others the more certain of; those things which I have not done, I leave as they are. The beginning of the Labour I have clearly enough proposed; from which, if any man cannot learn more, 'tis best for him to abstain from this kind of Labour.

All the Philosophers cry out with one voice, *Fix the volatile, and volatilize the fixt*, and you shall have the true universal medicine. From which scope he will not erre, who shall take good subjects for his work. Therefore, because in this our operation, Gold (besides the rest of the metals) being endowed with a most pure body, is rendered volatile and fugacious, and stript of its *Anima*, verily it will be credible, that of the *Anima* of Gold, if the *Anima* of Mercury shall be joined with it and digested to fixation, may be made the *Salamander* constant in the Fire. The purple *Anima* of Gold and Mercury which hath passed into the Receivers, I free from the Flowers of Tin, by washing it out with the sweet universal Water, known to every one, filtring it through Paper, coagulate it, and then fix it into a tinging stone. And I doubt not, but some good thing will thence proceed.

From the scoria remaining after the reduction, you may easily extract a medicine. Nevertheless, those scoria are divers, and have a diverse nature; for those which remain after the operation with Tin and Argent-vive, are of another nature and property than those which proceed from the working with other Metals adjoined to those two, as Gold, Silver, Copper, or Iron. Every Metal hath its own proper

powers and virtues, which in the extraction of the Scoria go forth together, and render that Extract more noble, or else diminish its virtues. Gold and Silver have a different nature and properties from Copper and Iron. Nevertheless Copper and Iron are not malignant or hurtful in the Scoria, but also possess great virtues. Nevertheless the greatest virtues which are elicited from the Scoria, are to be taken for a Tincture of Sulphur; for the Metals being destroyed by fulmination, and again reduced into a body, leave but a very small part in the Scoria, seeing that their greatest part returneth into a metallick body. Therefore the Scoria principally consist of fixt Nitre, and that Sulphur by which the destroyed Metals are again reduced into a metallick body from the Nitre. The Scoria of the Metals destroyed and precipitated by Coals, or common Sulphur, have one and the same nature, virtues, and properties. The Scoria of that reduction made by Antimony, partake of another nature, to wit, of a grosser and stronger than those which are made by common Sulphur or Coals, for they sometimes cause vomiting, which the other do not.

And this I would note, that because Antimony as yet containeth many Arsenical qualities, common Sulphur containeth but few, and Coals none at all; that therefore also the Scoria made by these, are safer than the other; nevertheless, I confess that those are somewhat cruder, and more immature than those made with Antimony; but being extracted with Spirit of Wine, yield an excellent Tincture, which is a kind of a Universal Medicine; for it is sufficiently known, that no subjects (Gold and Silver excepted) are found fitter for Medicine, than Antimony and common Sulphur. And because Wood-Coals exactly answer to this common Sulphur in their nature,

properties, powers, and virtue, therefore I commend the Scoria's made by them, and prefer them to those prepared by Mineral Sulphur and Antimony; not that there is a greater efficacy in Coals than in Antimony and common Sulphur, but because those of Coals dissolved by fixt Nitre, are rendered more apt and easie to render their virtues to spirit of Wine, are of a more easie extraction, and are somewhat more familiar to the animal nature, than common Sulphur and Antimony. But the Medicine prepared of either of those scoria, is efficacious, and differeth but little in its external species and colour. All the difference in those Tinctures, is, That that which is extracted from the Antimonial scoria, if it be taken in a little the larger dose, before fixation, causeth vomiting, and operateth more forcibly than the other two. All three after the manner of sulphurs, gild silver, help the growth of Vegetables, by dunging, and nourish and augment Gold being made spiritual, and closed up in the moist way.

And although I do not yet know what it can perform in the transmutation of Metals, yet I am perswaded, that if it were fixed and rendered constant in the Fire, and made to have ingress into metals, that it would effect something in transmutation. It sufficeth me at this time to have indicated the way by which a universal Remedy against all curable Diseases, is to be prepared of the remaining scoria. He that desires to know more, let him set to his hand, and search farther; the way is opened to him: But if he desires somewhat better, let him set upon the Spirit of Mercury and Gold, which is forced into the Receivers, and search for it in that. As for the remaining parts, *viz.* the metallick flowers, and the running Argent-vive, which passed together into the Receivers, the running Argent-vive may be

separated from the Flowers, and used again for the like labour, by amalgamating it with Jupiter. The Flowers are again to be reduced with the fulminated metals, that nothing of the Gold and Silver may be lost; so this labour being continued, will give a perpetual encrease of Gold and Silver, besides the tinging *Anima*, and the Expences will be only for the Salt-Petre, which will be little to those who know how to make Salt-Petre themselves, for the making of which, I have shewed the way; so that without any great labour, trouble, and cost, not only an honest livelihood may be gotten, but also a good medicine, for the relief and comfort of the forsaken Sick.

But before I conclude this my concentration of metals by Salt-petre, I think fit here to adjoin some admonitions for the benefit of the studious of these Labours. When in the reduction of the metals destroyed by the Fulmen of *Jove*, the scoria are left too long upon the gold, and not poured off in due time, they (after a certain magnetick manner) attract the remaining *Anima* which the Fulmen hath left in the Gold, and leave the whole pale. If Argent-vive be amalgamated afresh with this pale Gold, and this Labour sometimes repeated, the Gold will be wholly spoil'd of its *Anima*, being partly driven into the Receivers, and that which is left attracted by the scoria, then the gold loseth all its colour, and the scoria put on a bloody colour. From this red scoria the Tincture is to be extracted, by a certain singular Artifice, and to be used in the known manner. The pale Gold recovereth its yellow colour by Iron, Copper or Antimony.

Moreover, this is also to be observed, When by the Fulmen of *Jove* the *anima* of ☉ and ☿ is propelled into the Receivers, the Receivers being taken off, the

Flowers which hide the *Anima*, are to be taken out, and kept in Glasses close stopt. For the said *Anima* of ☉ and ☿ is so spiritual, volatile, and fugacious, that like a Bird it presently flies away, and leaves an empty Nest; the truth of which thing I have experienced. *He that will not believe what I say, let him try, and he will find it to be true.*

But that I may shew the studious of the Hermetick Medicine how he may experience this matter, I will declare by what chance I my self came to know it.

At a certain time, when I had taken the *anima* of Gold and Mercury, made by the Fulmen of *Jove*, out of the Receivers, not clearing one Receiver so well, but that somewhat of the *anima* remained therein; I put in some ounces of Water, that I might thereby the better wash out the remaining Flowers: In the mean time, some more urgent business called me away, I set the Receiver with the Water in it, upon a Table in my Laboratory, before or near a Window, and forgetting it, left it there for some daies; the Cold being then very sharp, in that time had frozen all into Ice; I coming into my Laboratory, to see if some Glasses, in which were Water, were not broken by the Ice, as is usual, I found some wholly filled with Ice, and seeing this Receiver to lie there, I presently believed that Receiver to be broken by the Frost; but taking it up in my hand, I found that the Water in it was not frozen, but remained clear, therefore I rejoiced that the Glass remained unhurt, and wondered much whence it should proceed; but I could impute it to no other thing, but to the hot spirit of Gold and Mercury, of which notwithstanding there could not above three or four grains remain in the Glass, which although so very little, preserved some ounces of Water from freezing. From that time

weighing the matter more diligently, I found an incredible heat in that *Anima*. Let others enquire and search what may be performed by such a heat; this I know, that hereafter there will be sedulous Artists, who will thank me for this my faithful Institution.

For it is very likely, that this subtile and fiery Spirit of Gold and Mercury, such as it yet is before fixation, may be presently used with great profit, in the taking away many occult Diseases of the Body. Moreover, it is to be observed, That if Metals, whether Gold, Silver, or Copper be to be conjoined by amalgamation with Tin and Argent-vive, they ought first to be reduced into pure and shining Calces, that they may be the more readily received by the Mercury: But only a fourth or sixth part of the Calx is to be added in the Amalgamation, lest the Tin (by too great a quantity of the Calx) be hindered in fulminating, for the whole operation consisteth in a right fulmination. But lest any should erre in working, he may first make trial, whether all things be well mixed and prepared, by putting half a dram of the mixture into a small Crucible, and upon that a live Coal, and beholding the Fulmen with an intent eye, that he may see what colour it gives: If it riseth so white and clear, that it dazleth the eyes, as the looking upon the Sun is wont to do, all things are rightly and orderly mixt; the smoak is tinged with the colour of the adjoined Metal, as Purple from Gold, Blue from Silver, Green from Copper, but Tin and Argent-vive only give White. Also from the Mass remaining in the Crucible, it may be seen whether the Fulmen be rightly performed, *viz.* if the *Caput Mort.* or residing Mass be porous, and fiery upon the Tongue, being touched therewith. The Colours also of that Mass are various, according to the added Metal; Tin and Argent-vive alone leave a fiery white

matter.

Neither is this to be passed by, being of no small moment, *viz.* If you seek not a Medicine, but only the emendation of Metals, it is not necessary to add Mercury with the Metals, but the Gold, Silver, or Copper may be melted with Tin, for so they become a brittle Mass, which may be powdered in a Mortar, and mixed with an equal weight, or a little more, of Salt-petre, and put into a strong Crucible, and covered, then put into a circular fire, so that the fire may approach it by degrees, till the Crucible and Matter be hot, and at length taking flame, may be enkindled and dispersed. In which operation many Flowers flie away, and a fiery Mass remaineth in the bottom, which is again to be reduced into a metallick body in a strong Crucible, in a Wind-Furnace, by the addition of some combustible sulphur, and after the reduction, to be reduced again into powder, and mixed with fresh Nitre, and again treated in the same manner, by sometimes repeating the former Labour. At length that Mass being reduced in a Crucible, the Gold, Silver, or Copper will be found augmented by the Tin.

NB. Because in this operation, not a little of the Metals flies away in fume, the Crucible may be set in some Wall, and on the Wall over it some Vessels or subliming Pots capacious enough may be fastened over it, that the Metals being kindled by the Fulmen, the elevated Flowers may be preserved and advanced to a purer Metal than they were before. This Labour doth not differ much from the Operation of *Basilius*, in which Salt-petre saith, *My Lover is a cheerful or pleasant Woman*, &c.

There are only two feminine Metals, *viz. Luna* and *Venus*, either of which serveth to this Labour, yet this

is more profitable than that, yea, and the same Labour giveth an augment to Sol, Mars, and Saturn, which are not feminine. When Tin is melted with ♀ or ☽, these pleasant females are elevated with joy, they sing, dance, and suffer themselves to be handled in what manner soever it shall please one to treat them, therefore they are called *brisk or pleasant Women*. This is an Operation not to be contemned, forasmuch as it well compensateth the Labour, and requireth but small costs besides the *Salt-Petre*, and also may be wrought in a great quantity, but our former with Mercury is better. There is yet more lies hid in this operation, but I think it not necessary here to recount all things. Let the Reader kindly accept of this, and shortly (God willing) more and better shall follow.

Whatsoever I have here written, is the very truth, and confirmed by many Experiments, in which every one may safely confide, and if he operates aright, will find the truth; for all things here delivered, are to be understood according to the Letter, and so to be observed in all the Labours.

A

TREATISE

Of an Universal Medicine;

OR,

A True Aurum Potabile.

Being an accurate Description of a True Universal Medicine, and of its admirable Virtue and Efficacy which it sheweth upon the *Vegetables*, *Animals*, and *Minerals*. A Gift presented unto all such Noblemen as are desirous to preserve their Health, and to attain to a Long Life; it being an *Universal Medicine*, or *A True Aurum Potabile*.

After that I had by GOD'S assistance described three excellent Processes in the Continuation of the Miraculum Mundi, *and had bestowed the same on men of several orders, that thereby they might the easilier, and with a safer Conscience, provide themselves with Food and Raiment:* I *was also desirous of tendering some small Present to Noblemen too, and such who are of eminent power and authority, and whom* I *had not forgotten to present with some Gift, which may serve for the preservation of their good health for a long time, and for the restauration of it when lost.*

For it is a thing of the greatest Concernment for the Nobles, and such men as are placed in the degree of Power and Authority, to have the fruition of bodily health, whereby they may wisely rule over the subjects committed unto them by God, and may use a sound mind about the defence of the Good, and the punishment of the Ungodly. Now a sound mind inhabiting in a sound body, doth proceed (next after the Divine Grace) out of a sound Heart and Brain. And it cannot be, that a publick Government can be rightly and well administred without a good Health; and this is as clear and evident as the noonday light is. Forasmuch therefore as the safety and preservation of all Kingdoms and Republicks is placed in the Wisdom of their Rulers and Magistrates, and that imprudence and ignorance of the Rulers is wont to ruin their Subjects, it is a thing of the highest consequence to save the Head of the whole Kingdom or Country sound, whole, cheerful, prudent and ingenious, and that he be not made unfit or uncapable for the Government, by diseases, sadness, slothfulness, and stupidity. Therefore the love of my Neighbour constrains me to publish this Universal Medicine for the sake of the Great ones of the World, seeing it is so much conducive to the perpetual felicity and happiness of a sound and good Government; for no man can be said to be a sound

man, if he be not of a sound constitution of Body. What benefit, I *pray, can a sick man bring to himself, or to other men? Verily none at all, but is rather an hindrance and detriment both to himself, and unto others likewise: For when the Head is ill, there are a great many Members must serve it; but if the Head be sound and well, it exerciseth the governance of the whole Body very happily.*

What profit has a man that is tormented with Sicknesses and Dolours, of all his vast Wealth and Riches, since he can neither use them nor enjoy them, looking upon them with a kind of nauseate, and at last leaving them with grief behind. Certainly a sound body is to be preferred far before all the Treasures of this World, and no body will gain-say this. He is to be judged the Happiest man, that possesseth those two the greatest Gifts of God, viz. *good Health and Riches. Sickness and Poverty are to be esteemed worse than even Death it self.*

We sometimes see, that pious Magistrates and Governours are snatcht away, and killed with small Diseases, which otherwise might have yet Ruled very many years over their subjects, had they had but good Medicaments, by help whereof they might have been succoured.

As for the way of Conserving good Health, and recovering it when lost, this little Book doth most exactly shew the same, which I *commend unto all those who are desirous of its preservation.*

Of a Universal Medicine, OR, AURUM POTABILE.

The Medicine that is honoured with the Title of *Universal* must be of this property, *viz.* to operate universally upon the three Kingdoms, *viz.* the Vegetable, Animal, and the Mineral, and to be able to succour each of them, as a most high Medicine should do. Whatsoever now does not abound with such an excellent property, the Title of *Universal* is falsly attributed unto it; nor is it worthy such a Noble Name.

Therefore it doth, in the first place, behove me really, and in very deed, to demonstrate in this Book which treats of such a Universal medicine, that this same medicine which is so intituled, doth also possess those very same virtues and properties which a Universal medicine ought to have. And farther, Such a Universal medicine ought not only to be a most friendly Auxiliary and Helper, universally, to those three Kingdoms, *viz.* the Vegetable, Animal, and Mineral, but it is likewise necessary that it be also preparable out of all those three Kingdoms,

Vegetable, Animal, and Mineral, and that too out of each apart, without the addition of any peregrine thing, and without any great labour, for the benefit and profit as well of the Poor as of the Rich.

They therefore do extreamly erre who are of such a foolish opinion, as to Dream that the matter of the universal medicine is only produced in such or such a place, and is to be fetch'd out of this or that Country with a great deal of Labour and Charges.

This opinion is Diametrically opposite to the common Vogue and Saying of all true Philosophers, who do unanimously confess, that their matter is every where to be found, and every one has it, and it is in the possession both of the Poor and of the Rich: And this verily is so open and evident a Saying, that nothing can be spoken more apparently.

For my part, I do affirm, that this Art is Vegetable, Animal, and Mineral, and that there is not a man to be found in the whole World, that has not the knowledge of this universal matter, and that does not use the same. Yea more, I do also affirm, that even a new-born Infant cannot live without it.

I have already accurately demonstrated in many places of the Writings I have hitherto published, that Nitre is found in all the things of the whole World; and so not only in all Vegetables, Animals, and Minerals, but also in the very Elements themselves, *viz.* in the Earth, in the Water, in the Air, in the Fire: And for this reason it both may, and deservedly ought to be called a Universal matter; for without the Elements can no man live. And now, whether any one believes this which I here mention, or does not credit it, 'tis all a case to me, what I have said I have said, nor need I say more. And thus much let suffice concerning the universal matter.

The Preparation I have openly enough treated of in many places of my Writings, but especially in my *Miraculum Mundi*, and in the other Writings thereunto appertaining; and therefore I forbear to make any more prolix declaration, and to multiply any more words about it.

But yet notwithstanding, I do here adjoin thus much, and confess, that although I have several times prepared that universal medicine, yet the Preparation thereof has not at all times answered my desires; nor hath it as yet been ever brought by me unto the utmost perfection and fixation, because I have wanted both time and opportunity of accomplishing it, and many other Impediments have hindered me from compassing the same according to my mind. But as concerning what Progress I have therein made, and that I can as yet perform or finish the same in three daies time; this, I say, I will consecrate to eternal memory, and in no case hold my peace, but speak on, for the instructions sake of Posterity.

And this I do to this end, that the omnipotence and bounty of God may be the more manifest, and that His Divine Name may be honoured the more, and that many Thousands of Sick people may be succoured with a most present and speedy Remedy.

This is the only cause that stirred me up to make this Discourse of the universal medicine; for I neither would, nor indeed ought I to burthen my Conscience by the concealment thereof, nor to hide and bury with me in my Grave, such a noble Gift of God, and the Talent which of His Gracious Benignity He hath been pleased to bestow upon me.

But yet I would not that any one should perswade himself that he shall (by his soothing words and

large promises of golden mountains) squeeze out from me the Preparation of the same, whereby he may make use thereof to lead his Life in Pleasures, Pride, and Impiety, and so hurt poor mankind. No, let such an one be assured, that I will never do so, for it is not in my power to reveal to every one such a great Gift, and which is of God, and not of Man, but 'tis in the power of God alone so to do: And as for my self, I would much rather die, than to reveal and prostitute it to a wicked man. Besides, I would not have any one to suppose, that whereas I call this medicine of mine Universal, it is therefore able to transmute the Imperfect metals into Gold, so as to furnish one with such vast Treasures as the Philosophers attribute unto their universal medicine: No, for I am as yet ignorant of such a transmutation, nor indeed do I covet it, or gape thereafter, but give unto God only most great Thanks for that medicine, by which (being vouchsafed me of His meer bounty) I am able to succour the miserable, sick, tormented, and diseased ones, and celebrate the glory and benignity of the Lord. I do withal readily confess, that I have not as hitherto received any benefit at all therefrom about the bettering of the Metals thereby; nor do I at all seek after any benefits in that kind of way, being contented with that Medicine, advanced to such a pass, as whereby it may be able to suffice me to get Food and Raiment by God's help. I covet not after abundance of Riches, and do only beg of God, that He would neither afflict me with Poverty and Want, nor bestow on me too much Satiety and Fulness, lest I should be lifted up with Pride, and say, *Who is the Lord?* Nay verily, if I could with this Medicine get my self great benefit, as to the metallick affairs, yet would I not do it, nor would I lay out such a great Gift of God, upon temporary

things, thereby to rob the poor, miserable, sick people of the same, for whose sake God was pleased to bestow it.

Perhaps it may so come to pass, that this my Medicine may, by the labour of diligent searchers, be brought to such a pass, as to be capable of exercising its power upon the lesser and imperfect metals, and that by a fruitful or profitable amending and correcting them: But this is a thing that God reserves to Himself, as posited in His alone good pleasure, whose Grace and Favour we must with a patient expectation wait for: Mean while we may lawfully enjoy this most excellent medicine, which being a most certain Argument of the verity and power, arising from such a notable Art, doth abundantly serve to stop the shameless mouths, and break the mischievous Teeth of all *Farnnerian* Asses. But yet notwithstanding some or other of them may haply spue out some poisonous stuff out of his shameless mouth, and say, With what right can I impose the name of *Universal Medicine* upon this Medicine of mine, seeing that I do not in the least deny, that it is not available to bring me any benefit out of the metals, but can only heal the Diseases of the Sick: Whereas the Philosophers do on the contrary attest, that their Universal medicine hath such virtues as are wont to transmute the lesser or meaner metals into Gold, and that with most exceeding profit.

For answer to such as these, I say, that although this medicine of mine which is here treated of, hath not hitherto brought me any profit by the melioration of the metals, yet it demonstrates it self to be universal, and to be worthy that same Title; for I have been hindered through want of time and other letts (as I said afore) from hitherto bringing it unto

perfection and fixation. And I pray who can tell what God will be pleased to vouchsafe in process of time. A new-born Infant cannot well be upbraided (if wanting wit and judgment it does not attempt and effect some great matters) and be on this wise twitted. Ho! it is not a man, 'tis beardless, it understands nothing, it lies along and cannot help it self, it has nothing but what they reach out unto it. Well, well, let the Infant but arrive unto its due age, and let its due meat and drink be administred unto it, and then in length of time it will attain to a requisite stature and strength, and will propagate and multiply its own kind. For if there be but once the humane form, there will not proceed ought else thencefrom, but a perfect man. Just so stands the case with my medicine, which is exceeding like to a new-born Infant, whereto regard being had, according to a Philosophical manner, there will be no doubt, but that it will arrive unto a due perfection.

And now, the things which it doth even already perform, do all of them sufficiently argue and testifie, that process of time both can & indeed must produce thereout of some better thing; even as a good Parent wisheth for nothing more, than that (whilst himself is living) his Children may grow up to man's estate, and be happily married, and by a new Offspring preserve his Name and Stock, and yield their help towards the multiplication of mankind, and he himself is wondrously joyed in his Grandchildren: But yet in the meanwhile he cannot be at all certain that his Life shall be so long prorogued, as to have a fruition of so much happiness, and therefore must commit the whole affair to God's pleasure, and patiently wait upon him, and See what that Omnipotent Creator (who indeed

shewed unto *Moses* the Promised Land, but granted him not so long Life as to enter thereinto) will do with him and his; even so hath the Lord shewed unto me the Promised Land, but whether or no I am worthy to arrive so far as to enjoy the pleasant Fruits thereof, GOD only knows; His merciful bounty hath bestowed upon me in my old Age a Philosophical Infant, which doth exceedingly rejoice me: But yet verily am I utterly ignorant whether or no He will vouchsafe unto me so long a Life, as to see the virile or man-like age thereof.

Therefore, like as a Father, unto whom in his old Age the Divine Bounty hath vouchsafed an Heir, tho' (haply) he well knows that the said Heir cannot possibly arrive unto man's estate, during his (*viz.* the Father's) life, yet nevertheless he is exceedingly joyed, in that he hath an Heir to keep up his Name, and which will in time trace his Father's footsteps (*viz.* have more Children): Even just so doth my new-born Philosophical Infant exceedingly rejoice me, though haply I know that my Life will not last so long, as to be a Possessor of the same, in the state of its being advanced unto perfection. However, I doubt not but that God will stir up other nursing Fathers to this tender Infant, that being educated and nourished by them, it may arrive unto a Man-like strength, and unto virile powers and virtues, and may become serviceable to the advancement of the Honour of God, and to the succouring of many Thousands of sick People. The way of attaining this, I have, according to my simple judgment, too and agen, and peicemeal as it were, opened and revealed in divers places of my Work, *viz.* how it may be most commodiously effected, and therefore I judge it needless to treat thereof any farther in this place.

Of the Nature, Form, Properties, and admirable Virtue and Efficacy of my True Aurum Potabile.

As touching the form of this same new-born Infant, I would have the well-minded Reader know, that it is like unto a poor, naked, tender Babe, of no splendour, of a simple aspect, but yet carries within it self all the colours of the whole World, which by how much the older it grows, so much the fairer colours doth it yield. The Fire affords it nutriment, and clothes it with Garments of various colours, and makes it strong, fair, noble, and potent, insomuch that it may not undeservedly be termed its Father. Being born out of the Earth its Mother, it loves it, and useth it for its nutriment, until that arriving unto full years, it becomes like its Father the Fire, and leaves its Mother the Earth, and like a Lord of full age, bears rule over its Hereditary Possessions. But during its Minority and Infancy, all its actions are look'd on as childish, but yet so that presently (or even now) appears what kind of notable man he will be, making good that Proverb; *Urit mature quod vult urtica manere*.

That which will a Nettle be,
Stings betimes, trust you me.

For seeing that a new-born Infant doth abound with so much virtue, as to be able to do so much good, What would not he be capable of effecting, should he attain to a ripeness of years? It will be therefore worth while to hear and see what virtues it is able to exercise upon Vegetables, Animals, and Minerals; and first, we will treat about the Vegetables.

By what way a Trial is to be made, whether or no

this Aurum Potabile*, or* Aqua-vitæ of the Philosophers*, be a most high Medicine for the Vegetables.*

Every body knows, that the Vegetables which are to grow up, and be multiplied, must be also nourished. This nourishment now is nothing else but a sulphureous Salt, whether it hath its Rise from the Vegetables, or from the Animals, or from the Minerals; for 'tis all a case to the Vegetables, from whatsoever it proceeds, so that they have but their nutriment, by which they may grow, be encreased, and be multiplied. The Husband-man useth the Dung of any Cattel or Sheep, to dung his Lands withal, that the Seed sown in the dunged Earth, may thence extract the Salt, and convert it into its own nutriment, and so grow up, and be encreased; and besides this kind of Dunging he knows none.

But the true Naturalist makes use of the Excrements of other Animals, yea, and the Minerals themselves too, for the dunging of the Ground; concerning which thing, I have written at large in my other Writings, and especially in my *Miraculum Mundi*; and therefore there's no need at all of making any farther repetition of the same here. Forasmuch therefore as my *Aurum Potabile* is also a sulphureous Salt, but yet far stronger, and more efficacious than that which lies in the common Dung of Beasts and Cattel, and so consequently promotes the accretion or growth, and multiplication of all the Vegetables in a wonderful maner. I have judged it a thing worth while to set down in this place the use thereof in the melioration of the Vegetables, that so it may be evidently demonstrated, that this my Potable Gold is the most excellent Medicine for all the Vegetables, and that their *Particular* Medicine which doth first

proceed from the Dung of Sheep and Cattel, doth afterwards display its virtues by an *Universal* operation. For if the *Dung* of Horses, Cows, and Sheep (as 'tis barely Dung) could but succour Men and Metals, like as it brings a medical or helping succour unto the Vegetables, then might it by the same reason be likewise called *Universal*.

But whereas it is an helper to the Vegetables only, and hath no conjoining familiarity with the Minerals and Animals, therefore is it rightly and deservedly to be referred to the order of particular Medicines, which are helpful to the Vegetables only. But yet notwithstanding, the Salt being extracted out of those sorts of Dung, and converted into Saltpetre, (which is a thing easily done) doth then admit of being transmuted into a *Universal Medicine*: But now, afore such a Transmutation be made, it does not exceed the order or bounds of *Particular* Medicaments. But this *Aurum Potabile* of mine merits the name of a true Universal Medicine, as being not only a most high Medicine for the Vegetables, but also for the Animals and Minerals too, and this shall be perfectly demonstrated as follows.

You must get some Vessels made of the best Earth, and strong, and such as being well burnt in the Fire, become like a Stone. And amongst such Earths, the *Colen*, *Siburg*, *Waldenberg*, and other such-like natured Earths, are the fittest for this Work; let them be made very thick, and such as will not imbibe any Water. If you want such as these, cause then your Vessels to be made of Glass; for every porous kind of Earth, though it be glazed over with Lead-glass, yet it is not so fit for this kind of operation; therefore you must of necessity provide your self with fit and convenient Vessels, and have a most especial regard

to this admonition. Let such a Vessel be a span long, or high, or deep, and let it have the same breadth or largeness, and let its bottom be perforated with some small holes, like as those Pots which are made for the keeping of Flowers in are wont to be: The Pots being thus prepared and filled up top-full, with clear and lean Sand, you may put or plant therein three or four Seeds of such Herbs that you have a mind to plant, that so if haply one of them comes not to good, the second, third, or fourth may. When the seeds are on this wise put in the said Sand, and shall have been moistened with our Universal Water, the Pots must then be set abroad to the Sun and Air, that so the Seeds may spring up and grow; which seeds, if good, and not too old, will in a few daies time, grow up out of the Sand, as if they had been in any other fat Earth. Now, when they shall have sprouted up so high as a fingers length, you must leave in your said Pots two of the biggest and strongest stalks or sprouts, and pluck up the others, lest they should impede each others growth; and you must let them have room enough in the Pot to grow.

This Vessel thus filled with Sand, and planted with seeds, is to be set upon another strong Dish or Platter, and which is made of the like sort of Stone-like Earth, that so if that medicinal water should happen to penetrate and destil through the sand, it may not be lost, but being saved, may be again poured into the pot-full of sand. Moreover, you must diligently take heed that no Rain-water fall therein and wash away that medicinal water, and so take from the Herbs their nutriment. The sand must not be too much wetted, but lie alwaies somewhat moist, lest by being quite dry, or too wet, the whole Work be corrupted by either the excess or defect of the due, temperament: All things here prescribed being

duly observed, the Herb springs up in a short time, and bears Flowers and Fruits sooner and better, than if it had grown in other dunged Earth. The Colours become fairer, the Odours will be stronger, the Virtues also will be greater, and these Herbs do likewise longer keep their virtues, and are not so corruptible as others are. After that all the humidity which you poured first on, shall have been consumed by the Sun and the Air, so as that it is plainly vanisht, there must some other Rain-water (wherein a little of that potable Gold shall have been dissolved) be again poured on upon the Sand, that so the Herb may have its due supply of nourishment, so long as it shall be a-growing, for the whole World knows, that there does not grow ought at all out of sand, which is only wetted with bare Rain-water.

Likewise by the help of this Universal Medicine all kinds of Herbs and Plants may be made apt to germinate and grow even in mid-Winter, and may be at any time amended, if so be that dissolved Liquor be but poured on upon the Roots. So will they be sooner ripe, and yield their Flowers and Fruits much speedier than those that are dunged after the common way; yea, and more too. I say, that as to their virtues and efficacy, they are to be preferred far before the common ones. The bare simple Universal Medicine is wont to shew so much efficacy, as is here mentioned: But now some metallick Ferment being added thereunto, makes it far more efficacious; for by means thereof, the Herbs acquire greater and better virtues.

If there be adjoined thereunto an aureous ferment, the Herbs will not only get the virtues of the Gold, but will also appear spotted here and there, in their Leaves and Flowers, with golden spots like little

Stars, and will wonderfully please the sight by their delicate aspect.

If a Silver Ferment be thereto added, the Herbs will be impregnated with Silvery virtues, and be painted with silver spots as they grow. The Herbs being by this means bettered with a golden Ferment for the Heart, and with a Silver Ferment for the Brain, do with a more admirable efficacy succour those Members. And if the great ones of the World did for their Health's sake take care for the nourishing such Herbs as these in their Gardens, there's no doubt at all to be made, but that they would thencefrom obtain most great benefits. For, besides their wonderfully delighting the sight with their beauty and delicateness, and besides their admirable virtues, in which they far excel the common Herbs, they do likewise bring this exceeding great profit, *viz.* they may be made use of instead of my *Aurum Potabile*, which perhaps some great men may be averse from taking, through the perswasions of their ignorant Physicians, who most-an-end do, by reason of their sottish stupidity and ignorance, snarle and bite at such kind of eminent Medicines, and divert their Lords and Masters from the using of them, as if they were so many Poisons.

If therefore (to free themselves from that needless care) they did but make use of these Herbs instead of my Potable Gold, they would however, by the help of such Vegetables, enjoy so much of the efficacy of my Potable Gold, as to keep themselves in good Health, or to recover it, being lost.

Besides too, the said Potable Gold may be most commodiously and fitly applied to the use of Mankind, not only by the help of the Vegetables, but also of the Animals too, and that on this wise.

Hens (or Pullets, *&c.*) are to be a while nourished with Oats, Barley, Wheat, or other kind of Grain, macerated with the Liquor of that Universal Medicine; and being nourished therewithal, they will by concoction or digestion transmute those Medicinal Virtues into their Flesh, and so be far more efficacious and nobler than the flesh of other Hens or Poultry. The Dung likewise of such Fowls may be Saved, and mixt with Sand, and Herbs be therein planted, which by this means will be rendered better than the common Herbs, because they assume to themselves the Reliques of that Liquor which the Fowls did not consume, and by digestion transmute into their Flesh, and so do convert it into their proper juice, so that there is not any thing at all of that Liquor lost, but the whole of it passeth into most notable profit.

Verily this is an excellent and admirable Transplantation of an Universal Medicine, into the Vegetables and Animals, the which the tender great ones of the World may make use of with the greatest security.

Such now as these (*viz.* the great ones) seeing that this Universal Medicine of mine doth not at all hurt the tender seeds of Herbs, or the young Pullen, but rather bestows on them a greater efficacy and strength, will doubtlesly be induced to believe and understand thus much, *viz.* that this same Medicine will in no case prove hurtful unto Men, who as to tenderness, cannot be like the seeds of Herbs, or like tender Pullen.

If this Medicine be of so great an efficacy as to be capable of transmuting some venenate Mineral, such as Mercury is, into true Gold, and that in a few hours space, as we shall see and hear by and by, it must

necessarily follow, that it is not infected with any malignity or venom, for the malignity of one thing does not amend or correct the malignity of another thing, but rather makes it worser.

From hence it is apparently manifest, that that Potable Gold does not at all partake of any malignity, but is a most wholsome Medicine for both Vegetables, Animals, and Minerals: Which thing, if any one will not give credit unto, or shall not be capable to understand the same, I know not what other help to afford him; for minding my own affairs, I have propounded and set down all things out of a good and sincere mind; if so be that any one hath ought that is better, let him produce it out-right, and not despise those things which he does not understand, lest haply he hazardeth his good name, as that convicted Lyar *Farnner* hath done, and be derided, and made a laughing-stock to the common People.

But *Farnner's* setting upon me with his calumnies and slanders, hath ministred unto me an occasion of answering, and of defending my self: Upon this occasion of my replying, there have sprung up, and come forth to the Light most excellent Secrets and *Arcana's* of Nature. Surely I should never have so openly published my knowledge in natural things, but should have lain hidden in quiet, had not that Blood-sucker and secret Murtherer thrown me out of my tranquility by his venomous biting.

But that it may not seem a thing strange and absurd, that I write, that this *Aurum Potabile* of mine doth induce into the growing Herbs a golden Nature, it seems a thing expedient unto me, to confirm the business by some true Histories.

In the *Hungarian* and *Transylvanian* Chronicles, it is

mentioned, That in those Countries, in which the soil or ground hath every where about in the Mountains, an aureous or golden nature, and from whence, for this Thousand years, even to this very day, much Gold hath been, and yearly is digged out by the GoldMiners, and been molten, and coined into Moneys, there have been oft times found such Vines, as have not only had their Leaves, but also the Grapes too gilded over, as it were, with Gold, just as if they had been artificially gilt. Nor is this an old Wife's Fable, but a thing most certainly true, and which many have affirmed unto me for a most undoubted Truth, some of which Persons have had their Habitations in those places, and othersome of them do even live there at this day. About some six years since, when I lived in *Franconia*, it chanced, that a Vine to whose Roots I laid Gold opened, and reduced into its first Ens, produced Bunches of Grapes, whose Stones were gilded: Which Story I have mentioned more at large in the Consolation of Navigators. And but very lately a certain Nobleman of *Hungary*, told me for a most certain Truth, that not far from *Cremnitz*, being one of the Mountain Cities of *Hungaria*, a certain Husbandman found in his Vineyard a piece of corporeal Gold, above an Ell long, grown out of a Stone, and twined round about the said Stone, a little piece of which was given me by the said Nobleman, because of the Novelty and Wonders sake.

But put case that this were not true, which notwithstanding is very true and indubitable, as being a thing known to the whole World, that such gilded Grapes are often found in *Hungaria* and *Transylvania*; yet however, those things that I have mentioned, and attributed unto my Potable Gold, are most assuredly true.

Nor can I alleadge any other cause for these gilded Grapes and Leaves in *Hungaria*, but this, that the Earth there is impregnated with golden vapours, or with the not yet hardened and coagulated first Ens of Gold, and that aureous water being mixt with the Rain-water, insinuates it self into the Roots and from thence ascends up into the Boughs and Grapes, and in them manifests it self, and becomes visible.

Even thus also is it with my *Aurum Potabile*, (which is like to a spiritual Gold) if it be dissolved with common Rain-water, and be therewithal commixt, and the sand (in which the seeds of the Vegetables were sown) be moistened with that Liquor, the nutriment is attracted out of the sand by the Vegetable Herbs, and being attracted, renders them partakers of an aureous nature: And this experience testifies to be a thing most true; nor can it be otherwise.

By these few things here spoken, every body (as I suppose) will sufficiently enough perceive, that my *Aurum Potabile* is a most high Medicine for the Vegetables. Now we will likewise prove by some few but yet clear and convincing Arguments, that it is a most high Medicine for the Minerals too.

Of the Use of my Aurum Potabile *in the melioration of the* Minerals.

As concerning the bettering of the Minerals by my Potable Gold, thus stands the case: It is capable of exhibiting to those that are inquisitive after the transmutation of the Metals, and would make trial of the same, some most exact proofs of the possibility thereof, both in the moist and in the dry way.

In the first place, it is behoveful for every one to

know, that the said *Aurum Potabile*, when brought to its due perfection, and such as my self know, hath the resemblance of a bright and clear water, is of a burning, hot, and fiery taste upon the tongue, and gives out a sulphureous, but yet pleasant odour.

But some may say, What can any such virtues be in a clear Water? What reason have you to call it Potable Gold, for that ought to be yellow or red? To such an one I answer, That in the whiteness is a redness hidden, which is not discernable in its tender Infancy; but when by the help of the fire it arrives to a greater age, then it discovers it self, and shews forth its comeliness and excellency together with most eminent strength and efficacy: For thus say the Philosophers, *Unless you make our Gold white, you cannot make it red.* And in another place, *If any one knows how to destroy Gold, so as it shall be Gold no more, he hath arrived to a most great Secret.* And again, in another place, *Our Gold is not common Gold, but Gold potential, not formal* (*or Gold in power, not in shape*). Such Sayings and Sentences the whole Troop of the Philosophers is full of; by which it is exactly demonstrated, that the true *Aurum Potabile* ought not to be presently red, as to the outward view, but that it merits this Title, if there be but only that golden and red virtue and efficacy lying hidden in its internal principle. For if this whiteness did not cover over an hidden redness, it could never possibly become red. Now my *Aurum Potabile* being coagulated by the means of fire, and reduced to a stability in the fire, is turned into a stone of a blood-red colour, and yields not in the melting any corporeal Gold, unless a metallick body be adjoined unto it, into which the Spiritual and Philosophical Gold, betakes it self, that so cloathing it self with a body, it may become Corporeal.

This potable Gold of mine is, *Lac Virginis*, or the *Virgins Milk*, which is coagulated with a small heat. This *Coagulum* Passeth into (or becomes) the *Dragons-blood*, which being coagulated, must necessarily yield the constant or durable *Salamander*. I confess, that hitherto I have not prepared it; nor had I any opportunity to prepare it, but remain contented with my *Lac Virginis*, as with a most excellent Universal Medicine, patiently expecting what the Divine Grace will in time to come bestow upon me.

But that I may proceed on to shew that my *Aurum Potabile* doth likewise heal the Minerals, amend them, and make them golden, I will here set down some waies of doing the same both in the dry, and in the moist way.

The manner of trying (by the moist way) whether or no my Aurum Potabile *be a true Philosophical Volatile Gold.*

Take of my potable Gold ʒ j. and ℈ j. or ʒ ss. of Common Quick-silver, put them into a strong Glass, and so small, as that it may be half full with this matter. (NB. The glass must have a round bottom, whether it be a piece of some small Bolthead, or of some small Phial, that so the Mercury may gather it self into one Ball in the bottom) and place your glass, with the potable Gold and Quick-silver, in Sand, to the heighth of the Liquor, then heat it, and leave it for about one hour in a sufficient heat, that the Phlegm being exhaled, the potable gold may stay behind in the form of a white Salt: This done, pour agen upon that Salt so much Rain-water as it evaporated in the boiling, or fill the glass so full with Rain-water, as it was before full of the *Aurum Potabile*, that so lying a while upon the said Salt, it

may dissolve it, which is hereby again turned into the same potable Gold, having the same colour, the same taste, and the same virtues as it had before. The Mercury being freed from the said potable Gold, which is to be poured off, is found to be hard, and fix in the bottom like the best gold, and of the same bigness or quantity, as when it was put into the glass. NB. If by some errour committed the *Argent-vive* be not enough tinged and brought to a due degree, but hath gotten some blackness, it is to be taken out of the glass, and put into some little Crucible, and to be heated red-hot with live Coals, that so it may receive the due golden colour; which said colour it will get, and will be like the best Duckat Gold, and will abide good and firm in all trials. But that *Aurum Potabile* which was used about the coagulation of the Quick-silver, may be often made use of about the same labour; but yet you are to note, that you alwaies take each time less and less Quick-silver to this operation, because the potable Gold doth in each of those successive labours lose by little and little its virtues.

This way of coagulating of Mercury may be likewise used about the coagulation of other Minerals and Metals, provided that the said metals be reduced into thin Plates or Leaves, and so put in; for being put in too thick, they cannot be totally digested in so short a time by the *Aurum Potabile*, into the due degree of Perfection, but remain (as their inside part) crude, and therefore an accurate regard is hereunto to be had. If this Labour be rightly done, the Metals will be throughly transmuted into pure and good Gold, and that of the same magnitude, figure, and form they were of when you put them in; but yet one metal is sooner transmuted, and more commodiously than another, according as it shall be of a nearer affinity unto gold. NB. If the Metal be not

in a due manner proceeded withal, but be as yet black when it is taken out of the potable Gold, it is then to be well heated red-hot, that so it may get its golden colour. And if there be even yet any doubt left, let him put it in ♃, and purge it by the Cineritium, or the Cupel, that so he may be assured of having true gold, and may be freed from all kind of scruple and doubt; for neither ♃ nor ♁ will take away ought therefrom; which thing the proof it self will most clearly demonstrate.

The manner of making a Trial, by the dry way, concerning the Transmutation of the Imperfect Metals, by my Potable Gold.

Take of my potable gold, or *Lac Virginis*, ʒ j. and put it in a glass dish; which done, and the dish placed in sand, evaporate all the humidity, until there remain about almost half an ounce of white Salt; put this Salt in a Crucible, with ☿ j. or ʒ ss. of the Plates of Silver, or Copper, or Iron, for Tin & Lead need not be laminated: Place your Crucible, together with the Salt and the Metal, amongst Wood-Coals, and the Salt will presently melt like Wax, and penetrate all the whole Metal, and transmute it into gold; and this operation is done in one quarter of an hour, or half an hour at the utmost. The molten Salt being poured forth out of the Crucible, you will find in the Same Crucible the Plate of the Metal, of the same quantity and shape it was of when put in, and throughly transmuted into pure good gold. The Tin and the Lead will be molten into Granes, as being of easie fusion, which Granes will have the nature of pure good gold. If the Crucible should be too much heated with too intense a Fire, it may also happen, that even the ☽, Copper, and Iron too may melt into

granes. And this I thought good to inform the Studious of.

These (O thou Lover of Arts) are the too Examens and Proofs of my potable gold, and of trying it both by the dry and the moist way, which if thou shalt rightly perform, thou shalt not erre from the mark. But now I must needs confess, that this Transmutation is not gainful, and I have already said before, that my divulging of all these things is only to this end, *viz.* visibly to shew the possibility of the Art. For although that the gold gotten by these proofs be true, and purely good, and passing all the usual Trials, yet nevertheless it brings no profit, because this *Aurum Potabile* requires so much expences, (afore it arrives unto this degree of power) as that the gold gotten by the benefit thereof, cannot countervail the same. Nay, if it should be somewhat profitable in this way, yet would that man do much amiss, that should waste away and imploy so kingly a Medicine for the getting of a little Gold, seeing there are other waies to get Gold by. And verily, it would be a great sin and shame for a man to consume such a most excellent and eminent Medicine for little mony's sake. Neither is it for this end, that I have thus mentioned what I have here said, *viz.* to use it about the making of Gold; for my aim is only this, that all the world may see that there are men to be found, even at this very day, upon whom the Divine Grace hath bestowed the Art of preparing and making most excellent Medicaments. I do not envy, that other men should learn something out of my Writings, and take the opportunity of advancing this Work to a farther perfection: But I would not have the impious ones at all to perswade themselves that they shall obtain this Instrument to do evilly, and to exercise their wickedness by God, who knows what He has to do,

will not do those things which are (perhaps) liking and pleasing to our fancies. I can every hour demonstrate the truth of what I have written, with which demonstration I rest satisfied.

I can easily conjecture that various men will pass various censures upon my Writings, but this is what I am not able to prevent; nor indeed do I much care, but I do herein comfort my self, in that I have written an undoubted Truth, and can defend it even before the whole World. I can withal readily guess, that some or other may object against me, and say as followeth, *viz.* That my Potable Gold is a bare solution of common Gold, which being adjoined unto the other Metals, is by them precipitated, and so reduced into its former body; and this cannot be said to be a true transmutation of the Gold. To refel this objection therefore, I demand, Whether or no the common corporeal Gold can be dissolved without some corrosive Liquor? For this *Aurum Potabile* of mine is void of all corrosion, and is a fiery water, most extreamly contrary unto all corrosives: Seeing it is nothing else but fixed Nitre, or a sulphureous Salt, betwixt which Salts verily, and common Gold, there is no familiarity at all; nor are there any such virtues therein, as to dissolve the Gold: But put Case it could so be, that the body of common Gold should be dissolved with those fixed Salts, and that by such a Solution it should dissolve (or make) my *Aurum Potabile*, verily it would necessarily follow, that such a solution of Gold would be of a yellow or red colour. But now 'tis not so with mine, for my *Aurum Potabile* is so clear and bright, as that it far exceeds the bright transparency of even Fountain-water it self: Besides too, the solution of corporeal Gold tingeth the hair, hands, and nails with a black

colour; but on the contrary, my Potable Gold does not so at all, and therefore justly and deservedly, it both may and ought to bear the Title of *Philosophical Gold*; for all the Philosophers that have been true Possessors of an Universal Medicine, do confess in express words, *That their Gold, or the solution thereof, doth not at all colour the hands*, by which Character and Sign they distinguish betwixt the vulgar and philosophical Gold.

From hence it necessarily follows, that my *Aurum Potabile* is prepared of the true Philosophical Gold, seeing it does not tinge the hands with any colour.

But put case that a Solution of common Gold should be made by the help of some *menstruum* that is not corrosive, (but such is not my solution) yet notwithstanding, it would not throughly tinge the Imperfect Metals and common Quick-silver in digestion with them, and transmute them, but would cover over (as it were,) their Superficies only with the colour of the precipitated Gold, like as is wont to be with all other solutions of Gold, and such a powder performing the same effect, may be prepared of common gold; the way of the Preparation thereof I have delivered in my Writings. Silver being therewithal laid over, is as well gilt, as if it had been done with Gold and Quick-silver: The superficies therefore is only gilded over, but the body of the Silver it self is not at all transmuted, but abides in its former state. So Gold dissolved in spirit of Salt, doth, by the help of the Vitriol of Venus, gild over the Superficies of any Iron, but the Iron retains its Irony property and nature: If to such a solution plenty of Water be poured, and *Argent-vive*, Tin, Lead, Iron, or *Bismuth*, be put thereinto, the gold is wont to precipitate out of the corrosive water, in the form of

a porous Sponge, and to adhere to the metal thereinto put. Now, as soon as ever the water is shook about, the precipitated gold disperseth it self abroad in the water, like a troubled muddiness, and the Metal is the same as it was before putting in, without any transmutation at all.

Moreover, if any Solution of common gold could tinge the whole body of the imperfect metals (but yet this can never be) it would necessarily gild over the external superficies of the Metals, and especially the external superficies of pure Luna, when rubbed or smeared over with the same; and even this now my *Aurum Potabile* does not do; but if it be smeared upon Silver, it colours and paints it with all kinds of colours, and as infinite as appear in the Peacock's Tail, and in such wise too, as that they cannot be easily rubbed out; and these Colours are an undoubted Argument, that this my *Aurum Potabile* is not the vulgar Gold, but the Secret Gold of the Philosophers.

All these, and other the like Objections, I could most easily prevent by due and fitting Answers, if they should be objected against me; but I think no body will be so audacious, as (without producing any better things) to oppose himself against those things which in the judgment of the whole World are accounted for good.

Of the Use of my true Aurum Potabile *in* Medicine.

To what purpose should I make many words of the most great Efficacy and Virtues of my Potable Gold in Medicine? I do not deem it a thing necessary to write a large Book concerning them, for such kind of Writings do many times more hurt than good: For

there is such an odd custom of Writing so prevalent, as that some men blush not oft-times to ascribe such great virtues to some coloured Brandy-wine, as can hardly be attributed even to *Aurum Potabile* it self. I confess, that many times there lies more Virtue in some very vile mean thing, than in precious and sumptuous Pearls.

But seeing that every one cannot discern the true from the false, and is constrained (on the contrary) to give credit unto those things which he draws in by his Ears, it cannot possibly be, but that he erre from the Truth, and often chuse the evil instead of the good; which defect is easily helped by making trial, and proving them, for this way is wont to try the Truth of things.

Should I but describe in an accurate manner the Virtues of my Potable Gold, it would fill a large Volume: And this is not my intent in this place, but (God permitting) it shall shortly be effected in a little Book, wherein shall be comprized many other of my best Medicaments, and shall shortly come abroad under the Title of *Glauber's Pharmacopœia*: And in this place I will in few words hint out the Use of my *Aurum Potabile*.

Therefore, forasmuch as my Potable Gold is (as I have already frequently repeated) a concentrated Fire, and reduced into a liquid form, and all its whole Essence may be said to resemble nothing else but some tender penetrating Fire, yet void of flame, every one may readily conjecture what it is helpful for, and what use it is of in Medicine.

Amongst all the Elements, the purest, subtilest, most penetrative, and most efficacious, is Fire, and this is granted by every body; for the force of the

Fire, *viz.* its heat penetrates even the most compact bodies, as Metals, and Glass; nor is there any thing that can stop its way; the Water, Earth, and Air are easily shut out. The Omnipotent God Himself is compared with Fire, from whom all things receive Spirit and Life, and without whom nothing can live or move it self, for without him, all things are dead, hard, and cold; as appears in the bodies of men and other Animals, which being alive, are alwaies hot, but being dead, become more cold than any Ice.

Therefore, as long as that small spark of Life in Man, and other Animals, is fed and nourished with its due Food and Drink, so long also doth it attract its nutriment, and continues in its vigorousness.

But as soon as it is destitute of its nutrition, and that it be taken thencefrom, the Life doth presently begin to be debilitated, and to fade, like as a kindled Lamp, if Oil be not poured thereunto, doth at last go out, and extinguisheth.

Seeing now that the Life of a Man is a meer fire, and is fed and sustained by a suitable Food and Drink only, like to a Lamp, which (without the pouring on of Oil, and without Air, without which no fire can burn, nor any Life live) cannot conserve its light. Some or other may demand, What the reason is, that such men are so easily seized on by Diseases, who have no want of the best Food and Drink, and which too is most fit for the sustaining of Life? Hereto I answer, That in such kind of men, the gross, crude, tenacious, and cold humours do shut up the passage to the point and spark of Life, whereby it is deprived of the nutriment, being hereby kept back. For an Example of which, Take a kindled Lamp, in which the Wick or Cotton is furred and clogg'd up with the Dreggs of impure Oil, whereby the Oil can

have no farther access to the burning Flame; and hence it comes to pass, that it goes out, and vanisheth, and dies, though there be store enough of Oil. So likewise is it with an old Tree, though there be store of Dung thereto applied, yet the vegetation is not alwaies, and for ever, but all things die at last. Now, the crude, gross, and clammy humours insinuating themselves into the Roots, do hasten on this death, and the Roots being stopt or clogged, the due nutriment is withdrawn or with-held from the Tree, like as is wont to happen in Men, and in burning Lamps, as we said but now.

All things have their natural Causes, the which thing God Himself hath doubtlesly so ordained and implanted in Nature, that all things in their order hastening on to their destruction, nothing may be found wholly constant and stable in natural things, but be all subject to decay and death, and that Eternity alone, and Divine stability, (or the durability of celestial things only) might be laid open.

Bright clear Water, having its course through Channels and Wooden Pipes, doth, after many years time, at length fill them with Dirt, stops them up, and bars up its own way and current. This is the Operation of the clear and cold Water of Fountains; the hot Baths do it far sooner, as appears in the *Aquisgrane* Baths, and others, in which the *Aqueducts* and conveyances for the Water are to be frequently opened and cleansed, whereby the Water may have the freer passage. Bur those Waters, which being hot, do (when cool) presently let fall their fæces in the Vessels, and stop or furr them up, do most speedily of all shew this same operation. The same is also done in open Vessels, if, *viz.* the clear and transparent Water of Fountains be several times

heated in a Copper, and be agen so often cooled, there doth then at length stick on to the inside of the Copper a tenacious sliminess, which at last is turned into an hard Stone.

If now the pure and bright Water of a Fountain effecteth such an operation, What, think you, would that Water do, which in its own nature is troubled or muddy, thick, saltish, and slimy. Hence it is that not only new-prest Wines, or that thickish, muddyish Must, do let fall their fæces to the bottom, and fasten their Tartar to the sides of the Barrel, but even the old Wines do likewise do the same, but not so much as the new ones do.

Now then, seeing that such kind of troubled drinks are used by men for nutriment, it is clearly necessary, that (the internal Bowels of the body being stopt by their dregginess) their nourishing property of the Life must with-draw, like as the feculent Oil withdraws from the light of the Lamp: For all those things which a man feeds upon, and daily drinks, do in process of time stop up the passages of the internal bowels and conveyances in the body of man, and so despoil the vital Fire of its nutriment. Therefore by how much the more this nutriment of the Life is withdrawn, so much the sooner is the light or vital Fire extinguished, and the cold and darksome death approacheth the nearer, and becomes superiour. From hence arose that old Proverb, *Eat such things as are well cook'd or baked; Drink such drinks as are clear; Speak such things as are true, that so you may be long-lived.*

But now some may say, I will therefore shun troubled drinks, and feed upon well-drest and well-prepared Meats, that so by shunning the way for Death's entrance, I may enjoy a long-life. I confess,

'tis well said, for sobriety in meat and drink, and the shunning of gross and crude meats, and troubled drinks, do much help to conserve health: But yet it does not follow, that he shall not be at length subject to Diseases, nor die; for there is no meat that is so well cook'd, and no drink that is so clear, but it carries with it its hidden fæces, with which the internal Vessels may in a longer process of time, be stopt up, and Diseases introduced, even as we shewed but now, by an example drawn from Fountain-water, which in process of time stops up its own passages: And by the same reason too must those Trees that are in the highest tops of the Mountains at length die, when (though they are nourished with most clear Rain-water) their nutrition is with-held from them by the stopping up the pores of the Roots.

But yet I do not say that an Oak, or some other wild Tree, in wild places, which is nourished only with the Rain-water, and the Leaves which yearly fall off, dures no longer than some Fruit-bearing Tree does, which is dunged and nourished in the Gardens with singular care and labour: No, for it is known, that an Oak doth many times endure and live a Thousand years; whereas on the contrary, such a tilled or tenderly-kept Tree scarce attains to the Hundredth year, and this is to be imputed to the diversity of nutriments. The Stag in the Woods, and the Crow in the Air, live above an Hundred years, but being caught and finely fed, they scarce live Fifty years. A man that lives barely upon Bread and Water, will doubtless prolong his Life to far more years than if he used delicate food and drink; and this is a most manifest thing, and yet men lay it not to heart, but by enjoying too great a plenty of delicacies, they burthen Nature with too great a load, from whence

obstructions of the bowels do arise, and a way laid for Diseases to enter in. A Tree that is dunged with too much Dung, gets to it self, together and at once, too much fatness, and this choaks up the Roots and hinders nutrition, whereby the body and boughs thereof cannot be supplied, and so consequently Death must enter in, and put out the Life of that Tree. What Counsel now? You will haply say, If that obstructions be the principal causes of Diseases and Death, are there no Remedies, by whose help such like obstructions may be prevented; or (if they already are made) be wholly removed and taken away? Yes, I say, that both may be done, *viz.* a timely prevention, and also a thorough abolition of them, when they have gotten head; and this to be done by such kind of Medicaments which are friendly to Nature, and contrary unto the things from which those obstructions and constipations have their rise; for cold, tenacious, impure, and watery humours must necessarily be attenuated, mollified, cut, and opened by heating, attenuating, inciding, or cutting, penetrating, and fiery Medicaments; for daily Experience teacheth, that it is a thing clearly impossible for obstructions to be taken away, what kind soever they be of, without the help of warming and penetrative Medicaments. And amongst all those Medicines, these are found to be the most certain and most efficacious, *viz.* the volatile Spirit of common Salt, or of Vitriol, void of corrosiveness; the volatile spirit of crude Tartar; the spirit of Urine, and of Salt-Armoniack, and other the like fiery Spirits, which do exercise their Virtues with most excellent success in the taking away of those kind of obstructions. But forasmuch as those volatile spirits do for the most part set upon and resolve such obstructions as are but beginning, and not as yet

confirmed, but do not seize upon the more fixt and inveterate ones, as having not so much strength as to subdue and cast out them, for they are to be cast forth by their like, that is, by the more fixt Medicaments; which thing no skilful Physician will gain-say. The whole drift therefore of the business lies in this, *viz.* by what means such kind of Medicaments may be gotten, as by whose help not only the newly-risen obstructions, but also the inveterate and confirmed ones too, may be driven out of the body of man. Now, this cannot be effected by Herbs, and such-like natured things, as is sufficiently witnessed by this present Age, for no body that is subject to those kind of obstructions, is cured by the help of the Herbs, and such-like things. For after that the sick Patient hath a long time used the palliative Cure in vain, Death at length comes forcing in, and snatcheth him away after his licking in many Pots full of such stuff, which notwithstanding, by some good Medicine might have been easily prevented: For, I pray, how can it possibly be, that a cold, gross, crude, and not well-prepared Medicine should draw forth cold and gross humours, which should be heated, cut, and mollified? 'Tis just as if a man would melt one piece of Ice with another piece of Ice, and so reduce it into Water; but yet it will never be done without fire or heat. And therefore a penetrating, fiery, living, and good Medicament, is to be applied unto those cold and tenacious obstructions, to heat, extenuate, and scowre them out; and the Syrups, Conserves, and the cold, dead, and mucous or slimy Juleps should be removed.

Verily, I cannot sufficiently enough wonder, when I think upon the small regard that is had to the Life of Man, and how rashly and wantonly it is neglected,

out of meer pure ignorance.

The present World is so blind and perverse, as that it neither will nor can believe this, though it be shown it even with ones fingers: But yet this stubborn perverseness does not hurt any so much as it does the Innocent, who understand not these things, and are even constrained to credit those things only which they hear of; all other things they commit to Chance and Time, together with the rest of those errours, unto which, as likewise unto other abuses, this endeavour of mine, will (if God so please) some time hereafter administer some Redress.

We do therefore conclude and determine, that the principal and chiefest occasion and cause of Diseases and Death, are these slimy, gross, tenacious humours, which by little and little seize on and stop up the internal bowels of the body, and withdraw (or withhold) from the radical humidity its nutriment, and so debilitates the vital fire more and more, and at length quite extinguish it.

Now, to remove and throw off these Furrings, there is no other Remedy, but that the passages of the internal bowels be kept open and clean, or that they be opened and unlocked, as 'twere, if already stopt up.

Now this thing my *Aurum Potabile* can perfectly effect; a better Medicine than which, and one more apt and fit to open all the obstructions of the body of man, 'twill not be so easie a matter to find; for it is in its nature a subtile, fiery, penetrating essence, warming all cold affects, attenuating the gross, inciding or cutting the tenacious, and consuming, and drying up all humours and Waterishness; insomuch that (being made use of) it doth inhibit

and impede the generation (or growth) of all kind of obstructions, and by mollifying and inciding them when they are already generated, doth wholly take them away: Upon this accompt, by its corroborating the radical moisture and vital spirit, and preserving it safe and sound, it gets the preheminence over all other such Medicaments as perform the same effect: Most worthy is it therefore to be called and esteemed the concentrated center of all Medicaments. For all those virtues which are found simple and divers or distinct in any of the Vegetables, Animals, and Minerals, and which do, by a *Particular* Efficacy, set upon Diseases; are concentrated in my *Aurum Potabile*, and being collected into one, do display all the virtues of those particulars universally, and therefore do these virtues discover it to be well worthy the name of an Universal Medicine: For this Medicament does not only exceed all other Medicaments in the most speedy operation of its virtues in the curing of the bodies of men, but also it plainly abounds with the same admirable virtues in the bettering of the Vegetables and Minerals; and therefore it is to be preferred beyond all others, and to be extolled with the highest Praises.

But now, if in case it should abound with far more noble and more efficacious virtues, (as to the taming and subduing the Diseases of men) then it already hath; and yet, on the contrary, should effect nothing by those its virtues in the melioration or amending of the Vegetables and Minerals, it could not possibly claim to it self the Title of an Universal Medicine, but would be rank'd amongst the number of *Particular* Medicaments, as tending only to the curing of the Diseases of Animals. But now, seeing that (as we said before) my *Aurum Potabile* doth most powerfully help not only men, in the Animal Kingdom, but likewise

in all the Vegetables and Minerals, (out of the Dominion of which three Kingdoms, *viz.* Animal, Vegetable, and Mineral, there is nothing in all Nature to be found) and is a most high Medicine unto them all; therefore also the Name and Title of a *Universal Medicine* doth rightly and properly appertain thereunto.

The Philosophers do indeed ascribe thus much unto their Universal Medicine, *viz.* that it is able to heal all the Diseases of Mankind, and of the imperfect Metals, and their defects, and transmute the said metals into perfect Gold. But concerning its being the supream medicine for Vegetables too, that they are silent in: Why they silently pass this over, for my part, I cannot certainly tell, nor do I deem it necessary to expound the same: 'Tis sufficient that my self have proceeded farther, and do manifestly declare, that it will perform the same in the Vegetables too.

But yet I would that every one should understand me aright, and not count me so simple, as if I did liken or compare my *Aurum Potabile* with that great Stone of the Philosophers, which transmutes vast quantities of imperfect metals into most pure Gold by projection: No, no, I do not ascribe such great Virtues unto my Medicine, which it has not in it, but yet withal I cannot tell, whether or no in process of time some better thing may not arise therefrom.

Farther too, the Philosophers say of their Medicine, that it can make variously-coloured precious Stones agreeable in any colour to the natural ones, out of all kinds of Flints. And now, perhaps some or other will require this of my *Aurum Potabile*; to whom I reply, as afore, so agen now at present, that my *Aurum Potabile* is as yet imperfect,

and is but in its infancy, which haply (being brought by the benefit of the fire unto perfection) will effect the self-same thing: But in the state which at present it is in, and whereunto my self have brought it, and 'tis at present constituted in, it is turned in three hours space in a covered Crucible, into a transparent Stone, red like blood, and resembling a Ruby: Of which, if a little bit be cast into molten glass, it makes it green, yellow, sky-colour'd, or even black too; according to the moreness or lessness of the quantity thrown in, or according as it is longer or lesser while kept in Flux. If now it operates these things, whilst unfixt and immature, any one may easily conjecture what it would effect, were it brought to a perfect constancy in the fire.

But it tingeth some sorts of the white Flints, kept for some hours in the Fire, with various colours, and transmutes Sulphur it self into most excellent Gold; which effect makes me more admire, than all the things that I ever heard of; and how this betided me, it will be worth the while, at present to make mention of. I did once put some ounces of my said *Aurum Potabile* in a porcelane dish, as they call it, and placed it in Sand, that by the evaporation of the Phlegm, I might reduce it into a Salt: But whilst I was absent, the heat of the Fire being too much encreased, a good part of the Liquor boil'd over the Dish, and spilt it self into the Sand, Now when I came to look to it, I perceived that the Liquor which boild over the dish had hidden it self in the hot sand, I took out the said sand, which with the *Aurum Potabile* was gathered into one body or mass, and I put it in a glass, and poured Rainwater thereupon, and placed the Glass in hot Sand, then I put the Water with which I extracted the Salt, into a Tunnel, together with the sand which was to have the salt

separated from it, and so I separated by a Filter the Liquor thus impregnated with the salt, from the sand, which said Liquor past through transparent, and unchanged in colour and taste: But now this sand, which was white at first, was clad now with a red colour, which stirred in me an exceeding admiration, that this Potable Gold of mine should tinge the sand. This sand I put in a Cupel, and brought it to the Test, and it yielded me pure good gold; and this made me wonder the more; for verily it is a wondrous transmutation, and such as I never heard of.

Upon this account do I perswade my self, that a piece of Crystal may by a bare digestion in this potable Gold, be digested into a precious Stone, but I have never as yet tried it, but yet I will try it, if God prolong my Life.

Having made this trial with the sand, I presently conjectured, that the sand which I planted my Herbs in, and which I moistened with my *Aurum Potabile*, did not impart the full virtues, and all the qualities of the gold to the Herbs, implanted therein, but did retain the better part to it self, for its own melioration, and afforded but the smallest portion thereof to the Herbs: Nor did this conjecture deceive me, for upon this occasion I searcht farther into this business, and found it even so. And therefore, for the future, I used no more sand, for the communicating the golden virtues and faculties unto the Herbs, but instead thereof, I used Sawdust, in which I began to sow or implant the Herbs, for Wood is not endowed with such powerful or strong virtues, as to be capable of extracting the aureous Essence out of the Potable Gold, like as the sand doth.

Upon this accompt therefore any rotten Wood or even the Sawdust of Wood will be more fit for this

Work of planting, than sand it self is, for the sand attracts to it self the most principal virtues of the *Aurum Potabile*, and thereby doth better it self, and bestows upon the Vegetables some small Reliques only. Had I not accidentally found this effect, the sand would have robb'd me of much benefit.

Moreover, this thing likewise, which is well worth the knowing, must not be passed over in this place, *viz.* that what herbs soever are (by the help of my *Aurum Potabile*) grown up, they are all of them greater and stronger than the common sort are, and do far exceed them in colour, taste, smell, and in all virtuous qualities. The reason is this, because the said *Universal Medicine* is a meer fire, and bestows its fiery vigour upon the Vegetables and Herbs: For it is a thing sufficiently known, that by how much hotter the Countries be, so much the more efficacious Herbs do they produce.

The Herbs that grow in the lower *Holland* Countries, are not comparable to those which the upper *Germany* (which is of a drier and hotter soil and air) doth produce, neither in odour, savour, nor virtues. Nor doth High-*Germany* produce Herbs of that efficacy and bigness as *France* doth, which is of a hotter and drier air than *Germany* is; for in *Germany* Rosemary will hardly preserve it self safe from being injured by the Winter season; whereas in the French Desarts it grows so exceedingly well, as that it runs up like Trees, capable of defending one against the Rain, the which thing is not usual in the more cold Countries. Verily most excellent Honey is brought from *Marseilles*, (where the Bees suck it out of the Rosemary Flowers) into *Germany*, *Holland*, and other Countries, wherewith excellent Metheglin is made, and other Fruits and Flowers conserved

therewithal. But that Honey which the Bees are wont to gather in *Holland* and *Friezland*, about in the moist Meadows and moorish Fields, from the Flowers there growing, hath scarce any odour at all, but yet it is in goodness beyond that which the Bees gather from the strong-smelling Flowers of wild Trees, or from the Blossoms found in the barren Broomy Thickets. By this therefore it appears, that there is a vast difference between the Virtues of the Herbs in this or that Country, and that such men are not a little deceived, who without any regard had, esteeming of all the *Europæan* Herbs alike, do attribute to the Herbs of the Northern Countries, as *Denmark*, *Swedeland*, *Norway*, *Poland*, the self-same Virtues as the ancient Physicians ascribed to theirs, in the more Southern Countries. And thus do our modern Galenists, affirming that their moist Herbs in these cold Countries are of equivalent Virtues to those Herbs which the ancient Physicians have made mention of; but Experience sufficiently testifies what effects they shew, and what errours the said Galenists commit.

Avicenn, *Averroes*, *Ægineta*, and the pillager *Galen*, were not *Germans*, *Swedes*, *Danes*, or *Polonians*, but dwelt in those hot Countries, wherein the soil or earth was day and night heated with the Solar rays, and impregnated with an aureous property, and so communicated to the Herbs wonderful Virtues and admirable Efficacy. Extreamly therefore do they erre, that dare attribute the very self-same virtues to the Herbs of our colder Countries. But I confess, that by the benefit of Art, the self-same virtues may be bestowed on the Herbs, even in our most cold Lands, which those Authors attribute to their *Arabian* Vegetables; *Where Nature ends, there the Artist must*

begin, say all the Philosophers, but especially *Hermes*, who is, as it were, the Father of all the Philosophers, doth clearly and openly testifie the same in his *Smaragdine Table*, saying, *That which is beneath, is like that which is above; and that which is above, is like that which is below, for the accomplishment of the Miracles of one thing*, &c.

And albeit that these words are expounded with divers Explications, yet notwithstanding, the general sense and meaning of them points at nothing else but the superiour and inferiour ☉, which generates all things, and brings them to perfection: We cannot by any force draw unto us the upper ☉, much less enjoin him to make our Lands partakers of his more hot beams, and to fill the Herbs that grow therein with the self-same virtues that the *Arabian* Vegetables were endowed with: Alas, the Sun neither hears nor knows us, but proceeds on in its accustomed course, and dischargeth that Office which was imposed on it by the Divine Power. If we are desirous of bettering those gifts of Nature that are vouchsafed unto us, then must we set about the Work of Art, and see whether or no it (being an imitator of Nature) can afford us any help. And this it will do very easily, insomuch that our *Europæan* Earth may bring forth as efficacious Herbs as the *Arabian* soil doth, and that with small Costs and Labours; so that there is no need of my more chargable *Aurum Potabile* for the accomplishment of that business; for a sulphureous and fluid salt Water will perfectly effect the same, seeing that in salt and sulphur the Solar beams are abundantly concentrated and coagulated. This is our Terrestrial ☉, by the virtue whereof all things do grow, which if we do but know how rightly to fit and order, we should verily effect the very self-same thing by the help of Art,

that the superiour and natural Sun operates in the Herbs, after its natural kind of way.

He now that neither understands nor apprehends these things, is not at all worthy to be accounted a Philosopher, but follows after blind Leaders, and hurries others as well as himself into darkness. The Sun performs its course in the Firmament, according to its accustomed manner, and cannot be rendered either greater or lesser: But we have the inferiour Sun in our power, and can accommodate it to our Herbs according as we list our selves, and in what quantity we please.

Upon this accompt *Art doth far outstrip Nature*; and 'tis in our power, by the help thereof, (*viz.* of Art) to outstrip it, if so be we have it and know how to use it. But this Discourse of mine hath been more large than I intended, and minds me of desisting therefrom. I suppose I have spoken enough for a wise man's instruction; and thus much I thought it was expedient for me to hint by way of a Parenthesis.

But yet however, that I may the more clearly and more perspicuously set down all matters, that so every one may see and apprehend, that I have set before them the meer pure naked Truth; I judge it expedient to insert here yet more Examples and Instructions, that so whoever has a mind to make trial, may in very deed experiment the Truth of this thing.

Coagulate my Potable Gold into a red Salt, and put in 3, 4, 5, 6, 7, 8, 12 grains, more or less, into half an ounce of Crystal glass melted in a Crucible, that lying in the superficies thereof, the said grains of *Aurum Potabile* Salt may be molten. This done, the glass will presently attract into it self the Tincture, and become of a Jacynth colour, and so delicate, that it is not a

whit inferiour in colour to the natural Jacynth. NB. If the melting be continued yet longer, the glass will be tinged with a golden, green, sky-coloured colour, and at last with a black-colour too, if it be too long left in the fire.

He that desires to make a Ruby, let him put the bare coagulated Potable Gold (without the addition of any peregrine thing) into a pure and covered Crucible, and there leave it in fusion for some hours, and he will get such a delicate blood-like coloured glass, as is capable of refreshing a man's nature, when debilitated with the multiplicity of cares, troubles, and labours, and this by a bare looking thereupon. And any one may easily conjecture what a refreshment it will be to a man's mind, when (after abundance of vain-spent labours, and exceeding earnest expectations of the Blessing of God upon them), he doth at last see with his own eyes, that that thing is possible to be effected, which with such an incredible, ardent a desire he hath so long a time sought after. Without doubt the seeing of the promised Land did affect *Moses* with an unexpressible joy, though he never entred thereinto.

What man knows by looking upon the seed of any thing, what colours and what figure the Plant is of, that will proceed therefrom? but in its growing up by a due nutrition, it doth at length become manifest, which afore lay therein hidden: Even so the true first Ens of Gold lies hidden in my *Aurum Potabile*, and is not visible to the sight, much less doth that appear which shall or may by Art be made thereout of, before it shall have arrived unto its constant fixity or fixation, (as the Chymists phrase it) by the help of the fire. And therefore must there be a patient expectation until this Infant wax ripe, and attaining

unto a man-like estate, it performs man-like actions.

Who would ever have believed that there lies hidden in an Egg the whole essence of a Bird, with all its Members, Feathers, and whatever else appertains thereunto, but that it is a thing so thoroughly common? The Must of Wine, if drank in too great a quantity, hurts the stomach, weakens it, and causeth Colick pains; and the same Liquor, after it is become a strong and clear Wine, corroborates the stomach and the whole body, and so at length lays off those virtues or properties which it held hidden in it self whilst it was Must. He that knows a Vegetable Seed, an Animal Egg, or a Mineral *primum* Ens, doth at last also come to know, that from a Seed there must proceed an Herb, from an Egg a Bird, and from the first Ens of Minerals an Universal Medicine: But he whose understanding cannot comprehend these things, but contemns them, as an abject or contemptible Seed, Egg, and first Ens of Minerals, *viz.* a sulphureous Salt, such a one doth even ignorantly despise the Herb, the Bird, and the Universal Medicine hidden therein. Therefore no body should contemn those things that he has no knowledge of. And seeing it is clearly perceptible, that the first Ens of Gold hides within it the true Universal Medicine, and which Time, Art, and Nature will really produce unto the Light: Therefore there is no reason why any one should undervalue my Potable Gold, or despise it, because it is as yet in its infancy, and is like some common salt water; but he should rather think thus with himself, that it is like the white of an Egg, which hides within its inward bowels, as I may so say, its yolk, which in process of time will bring forth a most delicate Bird.

But these things which I have already spoken of

the nature and properties of my *Aurum Potabile* may suffice; its Medicinal use shall shortly be clearly described amongst my chiefest Medicaments, and so be published, together with them. But he that is minded to make use of the same in the mean while, may safely do it, and without any kind of hazard at all, for it operates nothing else, but what is conducive to the good health of man's body, corroborating the debilitated radical humidity or vital spirit, and confirming it, by which the life of man is nourished, encreased, and conserved many years in a wish'd-for, healthful estate, just as a Lamp is kept alive by the pouring on of Oil, or the vigour of the Fire by the apposition of Wood thereunto, by which it is preserved from extinguishing and dying: But yet the use thereof must be warily and judiciously admitted, because being a meer pure fire, it must be moderately adhibited. At the beginning of administring it, one or two drops may be given in Wine, Ale, or other Drink, unto the Sick, but best of all in the spirit of Wine: Then the next following day one little drop more may be added, and so the Dose may each day be augmented by the apposition of one small drop, until it work by Sweat and Urine, and sometimes also gently by Stool.

This Operation being made (and on this wise active) then the Doses are to be in like manner daily lessened by the omission of one drop at a time, until the Sickness be happily removed, and so the Sick need no farther use of the same.

All things being thus rightly instituted, it will manifestly appear, that all Sicknesses, yea, the hidden ones too, are expulsed by this Medicament, and even as it were consumed like as Wood is consumed by a burning fire, in such wise, as that

nothing at all of it remains, save the fixed Salt, but is all reduced into a Nothing: For all Diseases, as we shewed afore, have their rise from moist humours, which nothing can heal and remedy more commodiously and safely than this *Aurum Potabile* of mine, which is such a vehement resister of all over-abounding humidities, opening, inciding, consuming, and dispelling them, just as the ☉ consumes Water in a Vessel, and wafts it away by evaporation. Hence it is, that it both cures, and by way of a preservative, prevents the *Leprosie*, *French-Pox*, *Quartane*, and all other *Fevers*; the *Scurvy*, *Epilepsie*, *Apoplexy*, *Hypocondriack Melancholy*, *the Stone in the Reins and Bladder*, the *Gout*, and all the *Diseases of the Matrix*, both known and unknown, and the various Sicknesses of Women, as also the dreadful *Plague*, with all the evil effects arising therefrom. For it is found that nothing is subject to Corruption and Death, but an abounding Phlegm, or an immature humidity which is wont most speedily to pass into a putrefaction.

From hence it is clearly manifest, that the sanguine man, which is endowed with a drier temperature, has a far better fruition of his health than the phlegmatick man hath, who abounds with moisture.

Dry Sugar dures many years, but being moistened, it turns sowre, and becomes ropy and ill-savour'd, tho' it be a Salt, and is mixt with other corruptible Vegetables to preserve them.

From hence may it be seen, that a superfluous humidity opens the Gate for Death to enter in by, and seize upon the Life: But on the contrary, a temperate siccity preserves all things in an healthful state, and barrs up the passage against any corruption. The Roof of a curious and stately-built

House being full of chinks and holes, lets the Rain in, which moistens all the whole structure, and causeth it to rot and spoil: But if the holes in the Roof be stopt, and the windows by which the Rain beats in be shut, and the windows on the other side of the house, where the wet beats not in, be on the contrary opened, that the warm Air passing in, thereby may throughly dry up all the moisture, and so inhibit or put a stop to the Progress of Putrefaction, then the whole frame and building will be kept sound and good, which otherwise would be rotted and quite spoiled. Such men as live in the moorish fenny Countries, and feed upon a waterish Meat and phlegmy Drink, are for the most part of an unsound temperature, and troubled with Catarrhs and the Scurvy. But on the other hand, those that inhabit high and lofty places, and have the fruition of a drier and purer Air, and that feed upon such meats as are more conducive unto health; these men know nothing of those watery sicknesses, but have flourishing and strong bodies, and have firm, compact, and excellently well tempered flesh. And this difference is not found only to be in Men, but also in all other things. For not only Bread, Flesh, Fruit, and such other things as are used for daily food, do grow mouldy much sooner in the moist places, and so corrupt, but also even Metals themselves too, as Iron, Copper, Tin, and the like, even these cannot shun the corruption of the Air, but are laid over with Rust, which (in a drier air) they do not so easily contract.

By all these circumstances it is so clearly evidenced, that superfluous moisture is to all things alwaies hurtful, and gives an inlet unto Corruption, that I think there is no body that will dare to say any thing to the contrary.

And therefore seeing that this *Aurum Potabile* of mine doth (amongst all other Medicaments, what Title soever dignified with) most notably excel in the taking away of Corruptions, and may be most safely made use of both for preservation from, and curing of Diseases, it ought to be accounted and esteemed of as an *Universal Medicine*, and that very deservedly, and which gives place to none.

These few things I was willing to describe here in this place, concerning the use, efficacy, and virtues of my Potable Gold, in the curing of the Vegetables, Animals, and Minerals. There shall suddenly follow more concerning the same, in *The Description of the use of my Principal Medicaments*.

It now remains, that I make some brief mention of the preparation of my aforesaid Potable Gold, although I have already often done the same in many places of my Writings, and have very clearly shown the same, but yet after a Philosophical manner, and without setting down any Receipt, but here and there by piecemeal; as for example, in my *Miraculum Mundi*, in its *Exposition* and *Continuation*, where it is briefly described, so as that it therefore needs not any farther illustration.

But yet, that I may abundantly satisfie all men, I do (by way of over-plus) admonish every one, that he do not think that this subject is to be sought after from foreign and far remote places, with a great deal of costs and charges; for the matter out of which my *Aurum Potabile* is made, is in every place, and offers it self even in a manner *gratis*, to the most poor as well as the richest, and without Costs, and is brought to its perfection in three daies space: To that perfection, I say, (that you may rightly understand my mind) as its infancy requires, *viz.* so as to become

a *Lac Virginis*, or a clear Universal Medicinal Water, which I call *Aurum Potabile*, and in which the most precious Dragon's-blood lies hidden, which is to be transmuted in a certain limitted time, by fixation, into a constant Salamander; the which I have not as yet ever effected, and therefore forbear to use more words, resting satisfied with this my *Aurum Potabile*, which I have many a time prepared by my labour, and here treat of, and forbear to multiply any more words about things of greater moment. In the mean time I doubt not, but that (if time and labour be bestowed hereabouts) this *Aurum Potabile* would arrive unto the utmost fixity and constancy, both in the moist and in the dry way.

Farthermore, I deny not, but that this same *Aurum Potabile* may be made of all the things of the whole World, but yet easier and sooner out of one subject than another. *There is no Infant that is born so poor, but that he necessarily enjoys that subject, and cannot live without it*: Therefore some of the ancient Philosophers have written, *That* Adam *and* Eve *had the same matter in* Paradise; when as yet they had no cloathing.

Mary the Prophetess and Sister of *Moses*, calls it, *The Work of three hours*; another calls it, *The Philosophical Work of seven daies*: I *Glauber*, being a new Disciple of *Hermes*, do most truly affirm, That this my *Aurum Potabile*, which I here treat of, may be perfected not only in three daies, but even in three hours space, and that out of such subjects as are every where to be found, and which all men know and make use of, and cannot be without.

I speak the pure naked Truth, without hiding it under any Coverings of similitudes or enigmatical expressions. And that no body may think that these

my Writings are not to be understood according to the Letter, but that they conceal all things under an hidden meaning, I do again affirm this third time, that the *Aurum Potabile* which I write of, may be made of any Vegetable, Animal, and Mineral, but yet sooner out of one than another. For although any one may prepare it out of a piece of Wood, Bread, or Flesh, and out of an handful of Straw, Leaves, or Grass, yet notwithstanding, it may be easier made out of an handful of the salt of any Vegetables and Animals, as being their concentrated center; and this I bequeath to the whole World as an infallible Truth. But I would have every one rightly to understand me, what Salt I here point at, *viz.* I mean no other, but that which is to be found in all things.

But that the true meaning of my words may be yet the clearer and openlier disclosed, I will adjoin a short but fundamental Discourse. It is not sufficient for a lover of Art, that is inflamed with a desire of obtaining some good thing, barely to read over such or such a Philosopher, and presently to perswade himself, that by the meer reading, he shall forthwith understand clearly and perspicuously the Art treated of. No, but he must accurately meditate, and consider what that is which he seeks for, whence it hath its original, and by what means or what way he may obtain it. For if we will make our search from the utmost and extreamest Coasts (or Bounds as it were) even to the inmost bowels or center, we shall find, that God was One and alone from Eternity, even till the time wherein it pleased him to create visible things for His own glory and delight. And when He went about doing this, He said, *Let it be*: Assoon as this *Fiat*, or *Let be*, was pronounced by God, it began to move it self, and to change (or turn) into four Elements, out of which Elements there afterwards

arose all those Creatures, which can be discerned with our Eyes, and without the four Elements they could neither be nor consist, and without them even Nature her self can bring forth nothing.

Now, if any one would endeavour after what is purer and better than those things which are generated from the Elements, he must make his attempts by *ART*, the which, by overcoming or outstripping *NATURE*, hath its tendency to that Butt whereunto Nature cannot attain; and he must there begin his operation where Nature ended hers, as not knowing how to make any farther progress: For then is a *Quintessence* obtained, which exceeds Nature one degree, and cannot be promoted by Art any farther.

But if any one has a desire of obtaining any better and greater thing than this same *Quintessence*, he must then proceed some other way; for (as we said but now) Art cannot make any farther progress beyond a Quintessence: And therefore necessity requires, that there be made a regress or retrogradation unto the Center from which the very Elements themselves have their original. This Center is that Divine *Fiat* or *Universal Hermaphroditick* Salt, participating of both natures, which being the true *Primum Mobile*, comprehends hidden in it self two contraries, which acting one upon another, do bring forth the three Principles of the three Kingdoms, *Vegetable*, *Animal* and *Mineral*, and do nourish them by the four Elements, and multiply them, and this is the common course of nature.

But now Art makes a much farther progress, and reduceth the *Circumference to the Center*, and doth not permit unto that *Center* or *Primum Mobile*, that the *Patient* be overcome or subdued by the *Agent*, by the operating of those two contraries upon each other,

nor does it suffer it to pass into those three kingdoms, *viz. Vegetable*, *Animal*, and *Mineral*, as into its Circumference, but doth so subdue, and keep, and bridle in that *Primum Mobile*, that it does not divide or dilate its Virtues by a large circumferential walk, as it were, but doth in a manner swallow them down into its own self, or concenter them; just as if a Dragon should bite off his own venomous Tail, and therewithal nourish himself, when he cannot light upon any other Food, and so by this means becomes a most high Medicine. And therefore most wisely said *Hermes*, *Our Dragon doth not die, but by its Brother and Sister*. It is a thing necessary, that one fire should overcome the other, and transmute it into a more noble essence. Such a fire as this, is my *Alkahestical Arcanum*, or true *Aurum Potabile*, with which wonderful things may be effected. It is a transparent clear Water, wherein the colour and form of fire lieth hidden and introverted; but yet that internal Fire is easily and speedily manifestable, and educible unto view, by either the dry or moist Fire. The dry way is done by the heat and fire of common Wood-Coals; and as for the moist way, a well-rectified Spirit of Wine is to be used, and such as is void of all its Phlegm. Take therefore of the dry and concentrated Fire ℥ j. put it into ℥ iij. of the moist Fire or Spirit of Wine, which moist fire will presently swallow up the dry one. These being both of them digested by a due heat of Fire for some hours, in a long-neck'd Phial or Bolthead, will put on a blood-red colour, and will manifest and expose to view its concentrated Virtues, with curious colours, and with a pleasant taste and smell, by which heart-corroborating qualities it far excels all other Aromatical Essences, that serve for the strengthening of the heart; for those properties which afore lay

turned inwards, and were shut up in its inmost bowels, are all of them drawn forth and made visible, and become subject to the external distinguishing senses. By this means the abject and little Infant which was clad in a white colour, becomes a speaking, strong, and prudent man, and this very *Lac Virginis* it self is changed into the most efficacious *Dragons-blood*. This now is the most true *Aqua-vitæ*, and the most true *Wine of Health*, some few drops of which being daily taken, do conserve good health, and bestow long Life.

Many honest men have with their own eyes seen at my House the admirable and most speedy effects of my often-mentioned true Potable Gold, and especially its operative efficacy in the transmutation of the Imperfect Metals.

If therefore such a one as is troubled with grievous Diseases, and who finds no help in those vulgar, commonly-known Galenical Medicaments, shall need the help of this my *Aurum Potabile*, I will out of Christian Charity willingly bestow upon him so much thereof, as may be requisite for the recovery of his former health; and this I will the rather do, that the wonderful miraculous deeds of the Divine Power may be made known in these last times.

No body shall fish out from me more Directions than those which I have too and agen hidden in my Writings, concerning this *Aurum Potabile*; let it suffice every one, that he can find this Medicine ready prepared in my hands, the which scarce one of an hundred would be able to make, were he a Possessor of the Secret.

This Medicine shall lie ready prepared by me as long as I live; I will not deny it to any body; nay more, I will openly shew the use thereof too, unto

some of my friends, in the melioration of both the Vegetables, Animals and Minerals themselves, that so the Wonders of GOD, and the possibility of Art may be manifested, and come to light.

And now, may it please the Omnipotent GOD, who is the beginning and the end of all things, to inspire us, out of His meer Grace and Mercy, and implant in our cold hearts, which are stopt up with darkness, the warming heating spark of His Holy, Eternal, Infinite, and all-correcting Light, that it may therein, as in some saltish and sulphureous Earth, be nourished, and grow up like a little Seed, and bring forth Fruit a Thousand fold, to the Salvation of all our Souls. *Amen.*

THE

SECOND PART

OF

Miraculum

Mundi.

In which is described the Magnificent Coming of

ELIAS THE ARTIST;

And that the wonderful *Salt of Philosophers* is the most Excellent Medicine of *Vegetables*, *Animals*, and *Minerals*.

By the help of which, not only *Vegetables* do grow, and are multiplied; Diseases of Men and Animals, whether internal or external, are miraculously Cured, and Imperfect Metals really changed into *Sol* and *Luna*; yea, pure *Sol* rendered able to sustain the Force of Fire beyond the natural 24th. to the 28th. degree but also from every Plant natural *Sol* is extracted, and disposed to *fixedness*, for multiplication of it self.

THE PREFACE.

Candid Reader,

Among ancient Philosophers of the Heathen, as Chaldees*,* Egyptians*,* Persians*,* Greeks*, and* Romans*, yea, and the* Hebrews *themselves, it was a long-received Custom, enigmatically to propose what they esteemed most worthy of confederation, lest such Secrets should either be divulged or lost; to the end, that unworthy persons having regard to the Letter only; and not respecting the Sence expressed in those words, might know nothing at all of them: But contrarily, the Worthy, enlightened with the Light of GOD and Nature, well understanding what is signified by those Words, might thence reap most profitable Fruit. The Truth of this is sufficiently proved by the Writings of ancient Philosophers; also by the*

Books of Moses*, and the Histories of the Prophets. For all these, or the greatest part of them, do indeed need another explication, than the Letter it self seems to inferr, because some occult matter is in that contained.*

In like manner our Christian Philosophers, both ancient and modern, discovered their Arcanum*'s enigmatically; as, among many other,* Basilius *and* Paracelsus *did: For, although these men delivered all things true, yet they are understood by very few: Which hath been the occasion of Contempt and Reproaches, with which ignorant men, and the evilly-disposed, asperse all Philosophers (among whom Kings themselves, and divers Princes, in times past have been, and are yet found) and say,* There is no such thing in Nature, as the Transmutation of Metals into a better state*; and that* The Universal Tincture or Stone of Philosophers was never found by any Man. *Truly it is a matter worthy of sharp Reproof, and not to be suffered, that the Chymical Writings of many excellent pious men, should (although most consonant to Verity) be so maliciously rejected, and proclaimed false. This is rather due to Chymical Mountebanks, (understanding nothing less than Chymistry) because they expose to sale the Philosophers Stone unto others: This sort of men have rendered Chymistry so vile and abject at this day, as many men judge it a Reproach to be called* Chymists.

That we might, as far as is possible, prevent this evil, and demonstrate those things to be true, which the above-named Writers have left to us, under the Title of The Salt of Ancient Philosophers*, which by* Paracelsus *is called* Elias *the Artist; we resolved to effect the same thus.*

Paracelsus *treating of the Transmutation of Metals, because he was not willing to insignize* The Salt of Philosophers *with its true name, refers the Reader to*

Elias the Artist, *who, he saith, when he comes, will teach the way by which the Transmutation of Metals may be effected. Here Men imagine Wonders, and generally regarding the words themselves, expect the coming of a certain Man sent from GOD, whom they believe, shall in the later Ages of the World, discover occult Arts, and make known the Secrets of Nature. Whereas, if the Name* Elias the Artist *be rightly considered, or a transposition of the Letters be made, we read* Artis Salia*, and these Salts indicate* Elias the Artist *of* Paracelsus. *These perform Wonders, so as a man possessing the Salt of Art, or knowing the nature thereof, may effect Wonders.* Elias the Artist *to such a man appears to be the cause of effecting marvellous things.*

Basilius*, in his Testament, did very obscurely describe this Salt, where he sheweth the way of making* The Stone of Philosophers *of common Vitriol; yet no man is able from those Writings to gather which way he should prepare the same.*

Also he that considers the words of Paracelsus*, where he foretells the coming of* Elias the Artist*, will find, that in that he describes Vitriol, both obscurely and openly; obscurely indeed in his Treatise entituled,* The Tincture of Naturalists*; openly, in that which he left, touching Vitriol in Species. He would not expresly say, that* Elias the Artist*, or* The Salt of Art*, was expresly contained in Vitriol; only this he was willing to shew to Posterity,* viz. *That the Art of changing vile Metals into better, was descended from the Ancients unto him, and with him should perish, until the coming of* Elias the Artist*, who should shew the true Transmutation of Metals,* viz. *in the* 58th. *year of the following Age. This time many have expected with grief and trouble, but in vain hitherto.*

Many Philosophers, besides Paracelsus*, have predicted the Coming of* Elias the Artist*, who coming from the* North*, attended with a strong Lion, shall teach Arts, find out and manifest the secret Treasures of Nature, and dispose the various mutations of mundane things for the benefit of Mankind. These have many men in vain believed to be spoken touching some one man; for if we consult the Writings of those men, who have set down this Prediction, we shall find them not to have intended a* Man*, but* Salt-petre *only, and his Brother the* Salt of Art*: Hence it is that they cry out,* O our Salt! O our Salt-petre! O our Radical Salt! *Hence also it is, that they write,* If GOD had not created this Salt, it had been impossible to make our Medicine*; and various expressions like to this, in many places of their Writings they use, as I have declared in several of my Tracts, especially in the Third Part of* The Prosperity of *Germany, where (among other things) I said,* I hoped that in time to come, by me should be unto all men exhibited *Salt-Petre,* or *The Salt of Art,* sitting (like some Monarch) in a Triumphal Chariot.

I doing this, take Paracelsus *out of his Sepulchre, and (as himself predicted) turn him towards the Orient, that is, I expose him to the Light, by which the verity of that Prediction may be discerned by All.*

Perhaps my Disciples may do the same; and they seeing the verity of the Transmutation of Metals, or restoring the Sick to health in a way unheard of, draw me after I am dead, or whilst I live, out of the Sepulchre into which my evil-minded Enemies have cast me. And when they do these things, they will effect so notable a mutation in Medicine *and* Alchymy*, as indeed for the future there will be even no Artist, who will not see and understand the frauds, ignorance, or hatred of the proud and high-flown Adversaries of Art and Truth, and justly*

oppose themselves against such malicious Enemies of true Verity. Thus may those who have long before been blind, receive sight, profess themselves to have been Opposers of Truth, and strenuously labour to suppress and amend what's amiss. In such a time not only true Medicine*, and the most noble Art of* Chymistry *would begin to flourish, but also all Arts would ascend to a greater degree of perfection; and so one Age will exhibit it self much more excellent than others. Wherefore my Prayer is, that the Gates may be opened to divine and natural* Arcanums*, that* Elias the Artist*, and the* Salt of Art *would discover the predicted* Golden Age*, and that the most Wise GOD would unto pious men grant an entrance into the* Land of Promise*, that they may thence bring Fruits, and present them to their Neighbours, for the Honour of GOD most high, and the solace and comfort of the Needy.* Amen.

Indeed Paracelsus *makes some mention of this Salt in his Works, calling it* Sal Enixum*; but we in our Treatise (published in the year 1658.) of the nature of Salts, have somewhat more largely expounded the matter, calling that* Sal Mirabile. *In the present Treatise of the Salts of Art it is expresly called* Elias the Artist*; the verity of which Appellation, we shall by the help of GOD clearly demonstrate,* viz. *that* Elias the Artist *of* Paracelsus *signifies no other than the* Salt of Philosophers*, prepared of* Salt-petre*,* common Salt*, or* Vitriol. *Indeed it is in taste like* Salt-petre*, yet it is not inflammable, although it may be procured by Art.* Paracelsus *and* Basilius *made it of* Vitriol*, as several parts of their Writings shew, which for better knowledge sake I shall here insert.*

Elias *and* Elisha*, what men they were, and what miracles they wrought, Sacred Letters shew. The Miracles they wrought were Divine; the same almost is*

our Salt able to perform in a natural way: Therefore not without reason have we called it The Monarch of the World*, or* Elias the Artist*; for there is no subject found in the nature of things, by help of which we are able to do the same, as may be effected by the benefit of This. The truth of this all Animals, Vegetables, and Minerals do witness, as we shall demonstrate variously anon.*

But some One may say, Since Chymistry *is treated of in so various Tongues, and there are found almost infinite numbers of Chymical Books, How comes it to pass, that this Salt hath so long remained unknown, even until this day, and it was never so clearly described by any Writer, as we thence could understand what it is, or which way it should be made? I answer, Writers and Readers also are found of a twofold condition. They, who writ by the guidance of Experience, did all acknowledge, and obscurely describe this Salt: Otherwise they, who compiled their Books from the Writings of others, being ignorant of the thing it self, proposed nothing but Fictions, leading the Reader into a Labyrinth and various By-paths.*

Writers are diligently to be considered; regard is not so much to be had of their Words as of their Sence; if this be minded by you, you will find none of the true Writers, who did not make mention of this Salt, which, as it is manifest to those that understand, so it is hid from those who are yet ignorant of these things. You may find very many, who in Writings seek the Stone of Philosophers*, and yet are ignorant what they seek, or what the Stone is, whether it be something black or white, hot or cold. And if such a thing should be presented to those men, they would neglect it, and after their fashion leaving the most precious Jewel, proceed to please themselves in Dung. Many men handle this Salt with their hands, yet what they have in their hands they know not, because*

they are blind, and their arrogant mind instigates them to betake themselves to things more vile. But on the contrary, not a few may be found, who will divulge none of those excellent things which they know. Oh, how happy is he that studies Taciturnity! he is permitted to lead a quiet life. I indeed do seriously bewail my so liberal Communication of Secrets, but I did that to discover the Wonders of GOD, to serve my Neighbour, and to preserve our Art. Egregious things would often be exhibited to the World, did not the high Ingratitude of mortals deterr the Writer, and prevent his good intention. When they find a man endowed with the Knowledge of some things beyond others, they flock about him, entreating him to impart his Secrets to them: there are found divers of this sort. The Wealthy come, the Needy come, and men of a middle condition also come. The first sort of men being, for the most part, very covetous, will return nothing in exchange; the second sort have not any thing to give; but the third only we have sometimes found grateful. What we have acquired with very great labour, we cannot easily impart to Enemies. Yet it often happens, that those who are judged good, are afterward found evil, and in a Farnnerian *manner, for Benefits received, return Calumnies and Reproaches. Therefore, in such cases there is need of great circumspection, and we must not discover all we know, lest afterward we repent. But as for my self, I have not changed my mind, I have begun to make known the Wonders of the Omnipotent, and will go on (GOD willing) and kindle an unextinguishable Light to this blind World. In this Treatise I shall only describe the wonderful Virtues of the Salt of Art, reserving the way of preparing or use to my Friends; for what are our Arms, we must not cast them away, lest our Enemies take them up, and wound us with them, after the example of* Farnner.

I speak of the Salt of Art*, the Virtues of which I know, I will not communicate its Preparation or Use; all shall be open to my Friends, (yet with respect of persons) more than is fit, is already discovered to Enemies. Is there any reason we should* cast Pearls before Swine*? If what others obscurely treated of, I should here openly communicate to Enemies, would they, think you, cease to do evil, and begin to do well? Although I purpose not at all to discover the Preparation and Use of this* Sal Mirabile*, yet I doubt not, but that I shall prepare and make easie the way for finding it out; so as in a few years space all* Europe *will see* Alchymy *flourish, and not so much any other way, as from the discovery of this Salt.*

Of other Arts, which we shall perceive to arrive to a more excellent state, the reason is the same. It is sufficient that I have shewed such an incomparable Salt is found in the nature of things; yea, I demonstrate the place where it may be found. If Columbus *had not told us, That the Occidental part of the Earth did abound with Gold and Silver, who could have found the same, to bring such Treasures thence to us? If some One had not revealed, that gold, silver, and precious stones were contained in Caverns of the Earth, and Pearls to be found in the Sea, who (doubting the event) would ever have been at those vast charges of Diggings and Fishings? But now we all know such Treasures are to be found there, none refuseth to search for them. And although they are not obvious to all, yet that they are in being no man doubts; even so I judge it to be with our* Sal Mirabile*. The virtues of it I deliver, which are great, and with most easie labour, and a very little direction; other things may be thereby obtained. The only moving cause why I propose these things, is the most Wise GOD, whose wonderful Works I neither would nor could hide or keep to my self any longer.*

THE SECOND PART OF Miraculum Mundi, &c.

I. *Of the Original of this Salt.*

Touching the Original of this Salt, I have before shewed which way it should be made of F. and common Salt. Yet I would not have these words be so taken, as if the same could be prepared no other way than this. The methods of preparing it are various; for it may be prepared of G. only, without the mixture of common salt, yea, of allume, sulphur, or common salt, without the addition of H. or without the benefit of the Fire of any other salt. No salt can be found, which is not a commodious matter for this salt of Art; yet it may be collected from one more easily, and more copiously than from another. But because we exhibited one only way of preparing that before, as well for other reasons, as because of want of time, and lest we should be too tedious to the Reader; therefore we now think it convenient to signifie, that these wonderful salts may be prepared, and that they are endowed with special virtues denied to others, which they exercise, as well

universally as particularly, in Vegetables, Animals, and Minerals. For, Who can deny that salt to be of another nature, which remains after the Destillation of spirit of common salt, and that which is left in the Destillation of *Aqua-fortis* or *R.* although they be salts of a most diverse nature, of which these are prepared?

Yet every one of these is endowed with power of dissolving and fixing. But that which is made of *Sal Armoniack* volatilizeth all bodies so, as the souls of them pass over by Alembick; in like manner a spirit separated from *Sal-Armoniack*, by the help of C. manifests other virtues and properties, than those which are found in the Spirit of common Salt. To one more accurately considering these, *Arcanums* of great note will exhibit themselves: But more of these elsewhere.

Of the Name of this Universal Salt.

On this Salt we impose the name of, *The Universal Salt of Philosophers*, respecting those excellent Powers and Virtues, with which it is endowed above any other Salt. We deservedly call it Universal, because it is the highest of those Medicaments which proceed from Minerals, Animals, or Vegetables; as in the following Treatise shall be demonstrated: Of Philosophers is added, because the demonstration of this matter is necessarily grounded on Philosophick foundations.

Of the Virtues of this Universal Salt.

Touching its virtues, they are innumerable, and we judge it impossible to discover them all; for if I should undertake only to write what I know of the

virtues thereof, a whole years time, day and night labouring, would scarcely suffice. Perhaps GOD will discover more to others; perhaps they, who are younger than I, may find what is to me unknown. By me the first, by me the Guide is opened to the Searcher an entrance to things more excellent.

My purpose is to communicate to others those things, which the most Bountiful GOD hath largely conferred on me, for His Honour, and the profit of my Neighbour: I intend, I say, to divulge the wonderful Works of GOD, but at this time (by reason of various businesses and hindrances) I shall only make mention of some of the virtues, which I find to be in my *Sal Mirabile*, or Salt of Art, reserving the more special explanation of all things to a more commodious time.

This Salt is rightly called Universal, because it is the principal Medicament of the three Kingdoms, *viz.* of Animals, Vegetables, and Minerals, and hath power to perfect and augment the same. I remember that heretofore I have attributed to Nitre the Dignity of this, and not without reason; yet in many things it is inferiour to this *Sal Mirabile*, so as it deserves not to be compared with the same. Therefore in no wise correspondent to Verity are those Writings, which teach, That by the help of a certain Corrosive, a transparent Salt may be extracted from a Metal, and that Salt, dissolvable in water, is the true Salt of the Wise. Such Writings are of no other use, than to seduce the Ignorant by Lyes.

For the salt in which a Metal is dissolved, deserves no more to be called or esteemed a simple salt, but receives the condition of a metallick Vitriol, whether that Vitriol is green or yellow, of *Sol* and *Luna*, or white, of *Mercury*, *Jupiter*, and *Saturn*; or blewish-

green, of *Mars* and *Venus*; for what is to be an Universal Medicine, extending it self to all Kingdoms, must necessarily have no extraneous thing mixed with it. This is consentaneous even to the Judgment of Rusticks.

The true Universal Salt should be partaker of no metallick matter; but altogether pure, and most easily able to put on the nature of all things contained in the kingdoms of Vegetables, Minerals, and Animals, and so exhibit it self a most excellent Medicine. And since these Properties are most fully found in our Universal salt, there is no reason we should ascribe to it less Honour, or not preferr it before all salts.

Intending to expose the Verity of these sayings to all, we begin first with Vegetables.

Of the wonderful power of the Universal Salt *in the kingdom of* Vegetables.

I said in my *Miracle of the World*, and the Continuation thereof, that a sulphureous sweet salt is the most excellent Medicament of all Vegetables: The Truth of which no man hath cause to doubt; for I have shewed in various places, that barren grounds are made fruitful by the addition of that. Of this salt, which we may use instead of Dung, there is great diversity, for it is prepared of Wood-ashes, of Stones burnt to Lime, and of other bodies putrefied by length of time. But the Chief of all these is Salt-petre, being the salt of Vegetables, Animals, and Minerals putrefied, especially because it is endowed with a certain occult and sweet Fire. Also the signature proper to it, clearly exposeth to our sight its augmentative virtue; for it exhibits not it self in a

Cubical form, as is observed in corrosive salts, (altogether adverse to the augmentation of Bodies) but Dart-like or acuminate. By this signature Nature intended to shew of what condition and virtue saltpetre is. And indeed, if Experience be consulted, the things we have proposed will be found true, *viz.* that in Nitre is a principal Virtue, augmenting Bodies. As for example: R. what Corn you will, steep it for a night and day in Rain-water, wherein Nitre is dissolved, commit it to the earth, and you will find, that it not only shoots up more copious stalks and ears, and hath a more swift germination and ripening, but also is endowed with a much more acceptable taste, than other Corn in the vulgar manner produced by the help of the Dungs of Animals. But of this matter, more at large elsewhere.

Pure Nitre is a salt genited in old Stables, from the Dung and Urine of Animals. Urine and Dung are no other than Vegetables themselves, putrefied by digestion in the stomachs of Animals; which concoction is wont to be perfected in 24 hours space: But Vegetables and Animals, out of the stomachs of Animals, cannot be putrefied without long time, especially when they have acquired some undue hardness.

Thus we see Putrefaction differs in respect of time, yet it acknowledgeth no diversity; for whether it be made in the stomach of an Animal, or out of it, it is all one, and never different in virtues. By this *medium* the Vegetable kind hath its propagation and encrease, but altogether in a rustical manner, because a better way is not yet known.

Indeed, unto Philosophers is known a more easie and more compendious way of reducing Vegetables, Animals, and Minerals to their first matter, or into a

sulphureous sweet Salt; yet they reserved the same among their *Arcanums*, lest such a most noble Art should be made too common.

As it is altogether impossible that the seed of any Vegetable set in dry Herbs should grow, or Man himself, or any other Animal, should be able to sustain Life, encrease, or be multiplied, with the only use of Sand or Flints; but earth moistened with a saline liquor, is required, unto which the seed must be committed; and in Man such Aliment must be digested in the stomach, as will easily be changed into nutriment of the Parts: so it is impossible to augment Metals, unless they have been before reduced to their first matter, and so spiritually conjoined each to other, as one may give nourishment and encrease to the other. All these things are far more easily and more readily performed by Art than by Nature.

By Art that all Vegetable, Animal, and Mineral subjects may most easily and swiftly be reduced to their first matter, which is a sulphureous sweet Salt; and by that means be multiplied, the true Universal Salt clearly demonstrates; which salt, if we observe its signature or long figure) is not only more excellent than Salt-petre, but is also generated easily in the air. We have discerned sand or a stone to imbibe this salt, if exposed to the air, and from an ingenited virtue thence to grow, yea, and that which first grew being taken away, in a few daies space another hath shewed it self, and so to Infinity. Indeed these things seem impossible, but they are not so to him who rightly knows Nature; for that augmentation is effected in a Magnetical manner, of which we do more fully treat in another place.

Hence, not without good cause, do we ascribe to

this Universal Salt the title of HERO, and a most rich and liberal Monarch.

The PROCESS.

A most easie Way of acquiring Spirit of Salt *together with the* Sal Mirabile.

R. of common salt two parts, dissolve it in a sufficient quantity of common water; pour *A.* upon the solution; put the mixture into a glass Body, or a glass Retort well coated, or else into an earthen Body or Retort. If a Body, set on an Head, and begin to destil with Fire of sand, encreasing your Fire gradually; with the first heat comes off the unsavoury Phlegm, which gather apart; when the Liquor comes forth sowrish, change your Receiver, and receive the sowre Spirit: Continue the operation till no more spirits will arise, then let out the Fire, and permit the Vessel to stand in sand till all is cooled, when cold, take it out, and if it be unbroke, fill it again with the aforesaid matter, and proceed as we taught: The Phlegm is not to be cast away, but must be kept, that in it may be dissolved Salt (because it is better than common Water) for another destination. Thus from every pound of Salt you will have ℔ j. of the best and most pure spirit. Dissolve the salt remaining in the Body or Retort (if neither be broke) in Water, filter and evaporate the Water, let it crystallize, the Crystals will be white, endowed with wonderful Virtues, to be declared here following.

Note, If the Glass be broke, there will be no necessity of dissolving the Salt, it will be enough to take out the dried *Sal Mirabile*, and reserve it for Use.

Note, This destillation may be performed in a

silver Body, for so doing, we shall be free from all danger of breaking; yet the Vessel must be made of very pure Silver, void of all Copper, lest those most sharp spirits do attract the Copper from the Silver, and so the Body become altogether porous and soft. Although in the salt is no property agreeing with silver, yet every destillation it raceth off some of the silver, which that you may save, gather the white Powder left in the Filtre, after filtration of the dissolved salt. Dry this Powder, moistened with a strong *Lixivium*, and melt it in a Crucible into silver; yet you must not institute this melting of the silver *per se*, because it hath acquired such volatility from the spirit of salt, as it will fume all away.

And although every destillation some quantity of the silver be raced off, yet you may destil the same matter some hundreds of times in the same Body, before you shall need a new one. Thus we shall have the less need of Glasses, and sooner perform the destillations, because a strong Fire may be given at first, without fear of breaking the Vessel.

A yet more compendious way is, when we set the Body alone upon a Trivet, and by putting Fire under it, extract the spirit; for so we shall need no Furnace, unless we will, for better constringing the heat: Nor will any great quantity of Coals be spent in such extraction, because ℔ j. of salt may be destilled with two or three ℔ of Coals.

This spirit being of it self sufficiently clear, and of a grateful taste, needs no rectification.

Yea, it is able to effect more than we ascribe to it in our Writings. Also the remaining salt effects other incredible things, besides those we ascribed to it in our Treatise of the nature of salts.

Plainly, after the very same manner as we have taught spirit of salt to be prepared, so may also be made *Aqua-fortis* and *Aqua-regis*. Instead of salt, take Nitre, and you will have *Aqua-fortis*; and if to a solution of Salt and Nitre, equal parts, you add a sufficient quantity of B. you will, by help of Destillation, acquire *Aqua-regis*.

Therefore since the infallible *Basis* and Foundation of *Medicine* and *Alchymy* is C. or else D. it is now known to us, which way, and for little Charge, we may produce large quantities of this Medicine; whereas in the vulgar way great Costs and Labour is required; and the more easily we can obtain it, the more abundantly profitable will it be to us, especially when we intend to bestow time in the transmutation of the more vile Metals. Wherefore its principal Use is directed to the Preparation of F. as is said most easily. Hence also the spirit of salt and *Sal Mirabile* may duly be used in true Medicine and fruitful Alchymy.

Of a Lyon and Panther is produced a most sharp-sighted Lynx; yea, of a Lyon and Eagle is genited a most potent Dragon, vomiting Fire, flying on high, and carrying up in the air an Horse, with a man sitting upon him. Although these can do very much, yet they could not preserve the most noble Art of Alchymy from being accounted unprofitable and neglected by evil-minded and ignorant men. Yet at length an unsatiable *Gulo* consuming all things, being genited of a Dog and a Wolf, restored the same to a due splendour. This dares to demonstrate the species of Metals to be mutable, contrary to the opinion of *Aristotle*, and by this means plainly shew and confirm, that *Alchymy* is most profitable, and contemned without cause. *Alchymy* stands obliged to

this, because by the same it hath recovered its pristine and truly royal honours; to this, because it both acquires favour and praise.

Of the Utility which our Salt of Art *contributes unto all Men, of what state or condition soever they be.*

The Utility of this is very great, for if seeds, before they be sowed, be steeped in it, they will yield an incredible encrease; which is a thing of very great concern to all men dwelling on the Earth, because they shall never sustain the want of Bread.

And will not the Husband-man, gathering in his Fruits for less labour and charge than in the vulgar manner, be able the more certainly to pay his Dues to the Magistrate?

Of Artificers also the Reason is the same; because they being hereby better able to exercise their Crafts, may also return the benefits thereof to their superiours.

Unto Physicians, by the help of this, are known more excellent Medicaments, and they being present, more speedy and certain relief is procured to the sick.

So is it with Apothecaries, Chirurgions, and their Medicines, Plasters, and Unguents, which by this are more perfectly prepared, and therefore the Cure is sooner, and more happily absolved, than by Medicines vulgarly known.

And I believe every Artificer and Trading Man, when he can perform his Work with less labour and charge, and acquire his Wares for less trouble and cost, will sell his Commodities to his Neighbours, at

a cheaper rate than he could before he found the benefit of this salt.

Husbandmen and Gardeners, and other such labouring men, when they can more easily, sooner, and more abundantly reap their Fruits than before, cannot chuse but sell to the buyers for less price than they could afford them at when they had no benefit of this.

Thus we generally see, of how great Utility our *Salt of Art* is, or what benefits may thence redound to men of every condition. What man, considering these things, will not imploy all his faculties that he may become the Master of such a salt, whence he may not only benefit himself, but his Neighbour also?

Of the Use of this Sal Mirabile *in Medicine.*

1. This Salt ought to be numbred among Universal Purgers, for by a Magnetick Virtue it extracts all sorts of noxious humours out of the Body.

2. This purging Property is augmented by Metallick or Mineral Bodies dissolved in it.

3. For expelling all depraved humours, the most profitable to be dissolved in it, is Antimony; when the Medicine is to be appropriated to the Heart, Gold; when to the Brain, Silver; to the Liver, Spleen, and Reins, Iron; to the Lungs, Tin and Sulphur; to the Habit of the Body, Copper and Mercury.

4. If purging Vegetables, Minerals, and Animals be boiled in the Water in which this salt is dissolved, and that decoction be used in a Clyster, we know all corrupt humours will be evacuated thereby.

5. In all those Persons, young or old, which cannot or will not take purging Medicaments, either by the

mouth, or otherwise, it will be very profitable to free their bodies from corrupt humours, to make suppositories of Honey and this salt mixed.

6. In *Head-achs*, all *Fevers*, and the *Epilepsie*, it will deserve the praises of a suitable Purger.

7. In *Catarrhs*, when the Head is full of Phlegmatick Humours, half a grane, or a whole grane of this snuffed up the Nostrils early in the morning, or in the day-time, wonderfully evacuates the Phlegm.

8. It is an admirable Remedy in Affects of the Jaws, and parts adjacent, as the Tongue, Tonsils, Cheeks, and Gums, having their original from a sharp Catarrh falling down, and oftentimes conjoined with Ulceration and Corruption, as is frequently known to happen in Scorbutick Diseases. For it extracts the humours causing the *Evil*, and heals the part vitiated, if it (dissolved in Water) be often used hot as a *Gargarism*, and the use of Purging not neglected.

9. In like manner, in the *Tooth-ach* it performs Wonders, drawing out the Humours causing dolour in the Teeth; if as much as will lie on the point of a knife, or ʒ j. of it, be applied, tied up in a fine Cloth, to the aking Tooth, yet after the use of some gentle Purgation.

10. It is a famous Medicine in Affects of the Eyes and Ears, drawing their Original from a *Catarrh*, provided the use of some Purging Medicine be not neglected.

11. This salt is egregiously useful, and especially after Metallick Bodies have been dissolved in it, against green Wounds of the Body and old Fistula's.

12. If it be mixed with a due quantity of common

Water, and thence a Bath be made, it admirably clears away the *Scab* and like Affects of the skin, better than natural Baths themselves; for by its famous power of attracting depraved Humours, lying between the skin and flesh, and producing such Affects, it heals and extracts the same, especially if that power be helped by some other Medicine.

13. It extracts Humours of every kind, sharp, gnawing, or which, are most firmly inherent in the external parts, or which often produce Vermin like Lice, and cannot be removed by Baths or Unguents.

14. This used internally and externally, (*viz.* in a Bath) extracts the Water out of Dropsical persons; and this it effects so much the more powerfully, if Gold be dissolved in it.

15. It is a famous Medicine for removing Dolours of the Gout, or diminishing the same.

16. Inwardly given, it is conducent against bloody Fluxes of every kind.

17. Also externally applied, it wonderfully stops Blood in Wounds, especially if after it is calcined and reduced to Powder, it be mixed with Cobwebbs or Peacocks Dung, or which is better, when Steel hath been dissolved in it.

18. It kills and expels all Worms.

19. In *Fractures of Bones*, and in *Ruptures*, it is a most excellent Medicament.

20. It, dissolved in Water, and put upon the body, not only preserves Insects from Corruption, but also greater Animals, and Man; yet it may be used in a more dry form.

21. It is an excellent Conditure not only of Animals

but also of Plants and Flowers.

22. It preserves bodies dissected from rottenness, stink, and dryness; contrary to what we have observed Turpentine, Spirit of Wine, Aloes and Myrrh to do; yea, from decay, as we have seen done in Salt-water.

23. It of Gold produceth an excellent *Elixir*, in a few daies, some granes of which used either liquid or dry, most gently expels depraved Humours by Urine, Sweat, and Seidge. Such an Universal *Arcanum* was never before this time known to Mortals; we liberally give it, for the Honour of GOD, and Health of our Neighbour.

24. It so prepareth Gold, as by the help of Alcolizate spirit of Wine, it passeth the Alembick of a golden colour, and is a famous Medicament.

25. Also by the help of that (although after another manner) a blue Tincture may be extracted from Gold, of excellent use in Medicine and Alchymy.

26. It is able to impress the nature of Vegetables on all Metals; so as Metals this way prepared, and added to the Roots of Herbs, impart to those Herbs the nature of the Metal applied. How famous the use of such Metallick Medicines will be in Medicine, it is easie to understand.

Of the Utilities of the Salt of Art*, in various ARTS.*

1. It suddenly coagulates River-Water, Rain-Water, or any destilled Water, so as it becomes Ice, and may be carried in Paper, a Sack, or Wooden-Box or Chest, wheresoever you will, and be dissolved when need is, so as the salt may be separated from the Water; which salt is not at all changed by the Water, but

may oftentimes again be used for like Coagulations.

2. After the same manner Wine, Vinegar, Beer, Metheglin, and like Drinks, may be reduced by coagulation into a clear substance, and again be most easily dissolved.

3. Also by help of that may be coagulated saline spirits, as, *Aqua-fortis*, *Aqua-Regis*, spirit of Salt, spirit or oil of Vitriol, and the like, so as they will become hard salts, without any change or corruption, portable in Paper or wooden Boxes, to other places, where being dissolved when need is, they exhibit a Liquor distinct from the salt, the salt in the mean while keeping its coagulating Virtues intire.

4. To Honey and Syrup it gives the consistency of sugar.

5. Fountains may be so stopped with it, as their flowing to be stayed.

6. It changeth wood in process of time into a most hard stone.

7. It abstracts the superfluous Phlegm from Wine, Beer, Vinegar, and spirit of Wine, so as they become the stronger.

8. It separates the Phlegm from subtile Mineral-spirits, whence they are made volatile and more powerful.

9. It takes away from Wine, Beer, Vinegar, and spirit of Wine, its ungrateful taste or odour, and unto them also gives greater clearness.

10. Also it corrects the unsavory smell of Vessels, so as we may commodiously use them.

11. It preserves for a long time all Fruits, as Cherries, Apples, Pears, Grapes, Garlick, yea, Hens-

Eggs, and whatsoever may be changed by the air, and otherwise would be corrupted.

12. Unto *Painters* it may be a *Basis* for their Colours.

13. The seeds of Vegetables moistened in it, are wonderfully multiplied, so as from one only grane 10, 20, or 30 ears will arise: And the same will be effected, if the salt it self be committed to the earth.

14. It causeth the Earth long to keep the Rain-Waters it receiveth. Hence must necessarily arise great profit to the Fruits.

15. This applied to the Roots of Trees, recovers them, though almost dead before, and makes them fruitful.

16. Yea, Animals suffocated or drowned in Waters, as Dogs, Cats, Mice, and Insects, by help of it may again be restored to life.

17. It attracts the breathings of many men lying together in one Chamber, and coagulates the same as snow or ice; not indeed by any reall co-touching, but being included in some Glass, and hung up by a Thread. Even so, in a Magnetick manner have we observed such breath or vapour to adhere to the outside of Glass like true Ice. But this is a Winter operation.

18. Flowers and odoriferous Herbs, by addition of this, may be preserved without change of odour, taste, or colour.

19. By the benefit of this salt, various colours and very many odoriferous species may be prepared; whence the Roots of Plants, if they be applied to them, attract the colour or odour, which they communicate to the Herbs themselves.

20. It takes away the bitterness of Oil-Olive, rendering it sweet and clear, better than boiling can do.

21. Linseed-Oil being mixed with it, is presently clarified, and freed from its Aquosity, which otherwise cannot be effected in many daies. [See more in the Second Century.]

Of the Use of the Salt of Art *in* Alchymy.

1. It dissolves and fixeth all Vegetables, Animals, and Minerals.

2. In three hours space it reduceth all the aforesaid into their first matter, whence most excellent Medicaments are made, and whence proceeds a product of Metals, new and more excellent than others.

3. It demonstrates, that in all Herbs, none excepted, there is volatile ☉, and teacheth which way it should be fixed.

4. It adds strength to *Aqua-fortis*, *Aqua-Regis*, and spirit of salt.

5. In a few hours space, it extracts the soul from Gold, so as it ascends by Alembick, and becomes a very excellent Medicament.

6. To the white body of ☉, and of other Metals, spoiled of its soul, it restores the same.

7. In a very short time it reduceth Gold to such an essence, as it may be united with the seeds of Vegetables, and communicate it Self to the Herbs.

8. It extracts Gold, Silver, and Copper from Metals most compendiously, and with very great profit, in a

dry way, without fusion or any addition.

9. It gives more noble qualities to metals, whilst they are washed in it, so as even by the help of such a Lotion, Iron can join it self with Mercury, yea, become fluid and ductile, like Copper, which is a thing very profitable.

10. It brings imperfect Metals by graduation to maturity, and so changeth them into ☉ and ☽, as well by the dry as humid way.

11. It can ripen every iron into steel.

12. By the help of this, Iron may be changed into Copper, Copper into Silver, and Silver into Gold, either by the humid or dry way. Also every Gold may be brought to the 28th. degree, yea, to a true Tincture. But of the last I have as yet made no experiment; nevertheless, it seems not to be impossible, because there is no metal which may not be changed into another, and indeed more excellent metal; yea, we know that common ☉ keeping its colour, may be exalted. And although the way of making this Tincture is not yet certainly known, yet there will be some one, that shall succeed us, to whom GOD will grant the knowledge of the same, who shall stop the mouthes of all slanderous and evil-minded men, and discover their malice.

But some one may say, How shall we know this colour of Gold to be true Gold, and not Copper? To him I answer; For this Process neither Copper nor any other Metal is required; only a Vegetable Sulphur with the Salt of Art absolves that. Whence then should the Copper have access to the Gold? To say, from the Vegetable Sulphur, is nothing: for that must be numbred among Miracles. Hence, if that should be Copper, we see it may well be

demonstrated, that all Metals yea, and *The Philosophers stone* it self, may be prepared of Vegetables. Which is a saying most nearly correspondent to Truth: for there is no Plant, yea, I say, no Excrement, no not humane Dung, which exhibit not true Gold, or a true Tincture. Therefore this colour, which we find to have access to Gold, by help of the *Sal Mirabile*, and Vegetable Sulphur, argues not Copper, but true Gold. The Elementary Rays of ☉ have passed into Sulphur in the coagulation in Herbs; this, by help of the Salt of Art, is changed into Tincture, when fixed, and added to Gold, becomes corporeal.

From these and the like, we judge the certainty of the Transmutation of Metals to be sufficiently manifest to every one. Indeed many have endeavoured to demonstrate this, but none more clearly than I have done, because this appertains to *Sal Mirabile* only. Therefore let Ignorants cease to gain-say GOD and the Truth, lest they be severely punished.

These, and various such-like Transmutations, may be performed with very great profit; therefore I judge it needless to speak more of them. Occasion of knowing many things offers it self to Posterity, if GOD give the Blessing. For the Utilities of this Salt are daily more and more known to my Disciples, so as it cannot otherwise be, than that all *Europe* by the help of this Salt only, shall see true Alchymy flourish. Whence, and not undeservedly, it is called the *Salt of Art*, or *Elias the Artist*, who entring into the World, should communicate various Arts to the same. Here you now have him, teaching those things which alwaies were accounted impossible.

The World not contented with this *Elias*, must

necessarily expect another. The Jews considering the abject state of Christ, esteemed him unworthy the Honours of the before prophesied of *Messias*, altho' with their own eyes they saw very many Miracles wrought by him. If the same happen at this day in this case, what wonder is it? It is very hard to belive, that such a wonderful Salt can be found in most abject Vitriol.

Could such men know the nature of common Vitriol exposed to the eyes of all men, they would easily understand more to be contained in the same, than I have attributed to my *Sal Mirabile*. It is better something should be reserved to Posterity, than all things laid open to our Age. I have begun, let others proceed.

Paracelsus, in that Chapter he writ of Vitriol, saith, By help of this every Iron may be changed into the best Copper but which way, something more excellent, *viz.* Iron, may be changed into Gold, *Elias the Artist* (which we call the *Salt of Art*) when he comes, will demonstrate, That the occult virtues contained in Vitriol may be more known to every man, what this Author left in Writing, touching Vitriol, I thought good here to insert.

Therefore, since I in this Treatise denominate my *Salt of Art*, *Elias the Artist* long since predicted, some one may properly say, *My* Glauber*, you proclaim your* Sal Mirabile *to be* Elias the Artist*; but in* Paracelsus*'s Writings we read, That when he comes, he will teach the way of transmuting Iron into Gold; now shew us which way your* Sal Mirabile *can do this*. I answer, That here is nothing of impossibility, I have obscurely in this and other places shewed; but which way the Operation is to be instituted, I have not declared: because I my self have not as yet obtained a perfect

understanding of the same. Nevertheless, that it is possible we have often observed; for Iron hath access to Gold, and so augments it even as it augments Copper.

For when Copper is dissolved in a certain salt, and the solution is poured upon thin Iron Plates, not only the Copper and Iron settle to the bottom, and so becomes Copper again, but also whilst the coction is performing, a great quantity of the Iron hath access to the Copper, so as you take out more Copper than you put in. I bring for a true Testimony of this Experiment, the Saying of that most true Writer, *Lazarus Ercker*, in his Probatory Book, where he saith, He had often observed, that Iron Instruments in length of time were changed into Copper, without any depravation of their Figure. Yet it is credible, that this Mutation is from Spirits, not from Bodies, because Spirits are endowed with a greater penetrative power.

Since the Writings of this man are in the hands of few, I thought good here to insert what he hath left written, touching the Transmutation of Iron into Copper.

Whether Copper *may be made of* Iron.

Courteous Reader,

I did for a long time persist in denying, That Iron in Coppery Waters, such as are made of Vitriol, green Tartar, and the like, could be precipitated into Copper; nor could I in any wise believe, that any encrease could come to Copper, from Iron; but daily Experience hath taught the contrary, viz. *That in Mines and Mountains of Vitriol, were left Iron Instruments, which after long time were changed wholly into Copper. For although*

precipitation of Copper is made, by the benefit of Iron, yet the same quantity of that, as is put in, is not taken out again. Notwithstanding this, here it is to be observ'd, that together with the Copper, which is so precipitated, Silver also (if any be) settles to the bottom. Therefore they seem to do well, who for Precipitation of Silver, besides Copper cast also into the Aqua-fortis *Plates of Iron: And so in one and the same Operation, Silver and Copper settle to the bottom, and we save all, which the separatory Water did contain.*

As it is manifest, Copper may be made of Iron, so also that the same may be changed into Gold, is most easily demonstrated. That it is possible, I have often observed, although without profit, because the true way of Operating was then unknown to me.

Iron is not changed into Copper in every solution, but in that which is in certain Determinate Salts. For, if you dissolve ℥ ss. of Copper in *Aqua-fortis*, and to repress the sharpness of the *Aqua-fortis* add a little common Water, cast in Plates of Iron, or duly institute coction; ℥ ss. of Copper will indeed be precipitated by the Iron, but the Iron not changed into Copper. The certain reason of this, we believe, is, because no Salt having power of Graduation, was added to the *Aqua-fortis*. Of Gold, the reason is the same, if it be dissolved in *Aqua-regis*; for the Gold is here found to be precipitated alone, and the Iron not changed into Gold, because of the defect of salt convenient for gradation.

But if a solution of Copper or Gold be made in spirit of salt, and Iron cast into that solution, then not only the Copper or Gold settles to the bottom with the Iron, but also in this solution part of the Iron passeth into Copper or Gold, because the spirit of salt more potently acts upon the Iron, and

introduced Tincture better than *Aqua-fortis*.

Although any Iron, as you see, may be changed into Copper or Gold, yet no profit is thence to be expected, for commonly some part of the Gold remains in the solution, and is not precipitated; and which way this may be separated from the Water is not known to all. Therefore it is better to omit this Operation, than to labour and be at charge to no purpose: For reduction of this Gold, mixt with the solution, experienced men are required, which will do all things with judgment, and are not contented with that only which exposeth it self to sight.

Yet I do not in any wise think that such gradation cannot be instituted without profit. If we can really transmute a very small Particle of Iron into Gold or Copper, Why may we not also do the same in a greater quantity? It is our faults if we do it not, who are ignorant how to use rightly Salts of gradation, sufficiently able to compleat the work. That the way of effecting that was known to *Paracelsus*, I doubt not; yet he would not communicate it to the ungrateful World, but referred the divulgation thereof to the coming of *Elias the Artist*, and that not without Reason. I doubt not, but that this gradation may be performed with very great profit, by help of my *Sal Mirabile*, or *Salt of Art*; yet I cannot subscribe to it as an infallible certainty. I have other things now in hand to speak of: My Labours and almost incredible Charges have discovered various secrets, which I publickly communicate for the profit of my Neighbour. Other things may be effected in time, by which (Darkness being discussed) Light may be given to the World, and the Miracles of the Omnipotent GOD be exposed to the view of all. *Here is need of Labour.*

That Gradation of Iron may be made by the help of appropriate salts, so as to be changed into Copper, Silver, or Gold, our *Sal Mirabile* plainly enough declares, whether the gradation be instituted in an humid way, or Cementation made in the dry.

Now it remains, that we demonstrate, that such gradation may be made by spirits, having power of perfecting and fixing, so as no consumption of the Iron be, as we see done in the addition of *Aqua-fortis*. It is sure that the same gradation which *Lazarus Ercker* said, he observed in the aforesaid Mountains, is of like condition; and since we possess such Spirits, we also, remote from Mountains, may effect the same. I cannot believe that any other can (if he would) teach us the way of preparing such spirits, besides *Elias the Artist*.

In what relates to me, I say, that this gradation of Iron may be the better performed, Copper, Silver, and Gold must first be reduced into Vitriol, having power to effect gradation, and that indeed by the benefit of the *Salt of Art*. I have more than once, by the help of the *Salt of Art*, changed silver or gold into a green Vitriol: I need not speak of Copper, the mutation of which is far more easie, yet the other is not very difficult, and indeed in an humid way. For I have not seldome (when it happened that the Iron being consumed, my labour was to no purpose) had one end of an Iron Wier changed into Copper, and the other into Gold. If time will permit, for my Friends sake, and that they may be mindful of me, I will repeat the same labour. But the principal thing, which infers difficulty in this Operation, is a too great corrosion of the Iron by the Vitriol.

Note. Besides this, there are other things, which cause difficulty, and so render the labour invalid, in

the dry way as well as in the humid, *viz.* the aptness of Glasses to break in the humid; and of Crucibles in the dry way; whence it comes to pass, that the *Sal Mirabile* cannot be kept in them a due time, but runs out.

The gradation of iron into gold, in what way soever made, without gold can very difficultly be perfected; and if a glass happen to break, Who shall be able to gather up what runs out? The loss of one gradation, by the breaking of the Vessel, and outflowing of the Liquor, will scarcely be repaired with 5 or 6 other gradations compleated without loss. Therefore it is best to desist from such Works.

Of that Operation, which is performed by the dry way, the reason is the same. For here the gold, which is added for gradation, is almost all lost, without regard to the breaking of Crucibles, which by that means cannot contain the *Salt of Art* its due time: And besides all this, the substance of the Crucible will imbibe some of it, and together with the same part of the Gold; and, Who can without loss extract it thence? Yea, we think the Crucibles drink in a greater quantity of the gold, than we acquire by the gradation, although our Work succeed well. By Experience it is manifest to me, that when there are eight parts of Gold, but one part of Iron in gradation is changed into Gold, which way soever the Work is performed. What will it avail to spend our time in perfecting those things, the event of which is very uncertain? This is the reason why very many with me have refused this profitable Operation.

We considering the possibility of the matter, whether it was possible to prevent those difficulties, began to labour, but to no purpose, a great while, until at length it pleased the Highest Giver of all

Good things to hear our Prayers, and opened to us the way of preparing such Glasses, as (although not luted) are able to bear the vehemency of Fire without coating; and Crucibles also we know how to harden so, as they will continually keep Metals in Flux. I now hope, if GOD hinder not, for better success.

A man not fearing the breaking of Glasses and Crucibles, might perform egregious things, this way handling Metals, according to his will instituting gradations and fixations, and so reduce Metals to due maturity, even as the sun, by continual digestion, ripeneth Fruits: For no man, if he fear breaking of his Vessel, and loss of his matter, is able to keep the same till its final compleatment in a Glass or Crucible.

By the benefit of either of these inventions, such things may be effected in Medicine and Alchymy, as before were impossible to be done.

Yet let no man sollicite me (considering the great labour and vast charge I have expended thereon) to divulge this secret. Nevertheless, that it may not be buried with me, I purpose to communicate that to two of my most loving Friends, adding (besides many other *Arcanums*) a succinct Explanation of this second part of the *Miracle of the World*. It will concern these men to use the same for the Honour of GOD, and good of their Neighbour. I did not this to profit our selves, because they are rich enough and I live contented with what I have, but only that the sustentation of the Poor might be chiefly regarded.

Iron may also another way be changed into Gold or Copper, *viz.* by the help of fiery spirits, which *Salt-Petre* (the Cousin-German of our *Salt of Art*) exhibits, and of which I have very plainly discoursed in a

special Treatise, not yet published. That you may see the possibility, I will declare the matter by example.

Make a Fulmen of Tartar, Sulphur, and Nitre mixt, to this add of the *Minera* (or Ore) of Copper, Silver, or Gold, never exposed to the vehemency of Fire, but still endowed with its own Sulphur, endowed with power of tinging and perfecting Gradation an eighth part. Put ʒ fs. or ʒ j. of the mixture into a Crucible at one time, and set this Crucible under the Receiving Vessels of our fifth Furnace, and with a live Coal kindle the Fulmen, and then the Orifice being well closed, you will find and observe the Gradation of Iron unto Copper, Gold, or Silver, according to the diversity of matter added to the Fulmen. Here most commodiously may be used Steel-Needles; these I have often drawn out of a Crucible, wholly changed into Gold.

Note. He who intends to make Gradation with Gold, must necessarily apply Receivers, in which he may collect the volatile Spirits of Gold. If a man be contented with a very small quantity, he needs not use Receivers, afterward (being first assured of the certainty of the Operation) he may build a Furnace fit for it. I built such a Furnace, in which the last Summer, for my Friends sake, I performed this Operation.

Note. If a sufficient abundance of good Metals be wanting, that your labour may not be in vain, it will be requisite to make the same spiritual with Salt-Petre, before they be added to the Fulmen. If you would make trial of graduating into Gold, to ʒ j. of the Fulmen, you may add ʒ j. of fulminating Gold (precipitated with spirit of Urine, not with *Lixivium*) and your endeavour will have good success, if you proceed right.

By help of this Fulmen, all Metals may be changed into Gold or Silver; that is, the true Regal Cement of ancient Philosophers, which they alwaies kept secret; only *Paracelsus*, in his Preface to the Book of Cements, was willing to make some small discovery; *You must not* (saith he) *so much regard the Ingredients of the Cement, but the way of cementing is only to be considered, the Fire only, which is in it, must be endowed with power of fixing and graduating.* Yea, in his Book of Vitriol he almost speaks the same.

But some one may say, What is that Regal Cement, or what is the way of using the same? Although this hath been alwaies kept as a Secret, yet I in these last times communicate the same to All. There is indeed no Metal, which may not (even without the addition of any other thing having power of perfecting Gradation) by the help of this only, be turned into gold; as in our work of ♄ we largely shew. Yet this Operation is not done with so great profit, as that which adds Powders perfecting gradations to the Cement; nevertheless it is sufficient to shew the possibility.

But that the Doctrine of *Elias the Artist* may be more manifest by the aforesaid *Paracelsus*, we thought good here to subjoin his own words at large, which take as follows.

THE BOOK

OF

Philip

Theophrastus

Bombast

Of* Hohenheim, *Monarch of Philosophers, Prince of Spagyrists, Chief of Astronomers, Paradoxical Physician, and great Master of Mechanick Secrets.

TOUCHING

The TINCTURE of Natural Things,

Against Sophisters born since the Flood, in the Age of Our LORD

JESUS CHRIST the Son of GOD.

THE PREFACE.

Since thou, Sophister*, with foolish and lying Words, hast reproached me in all places, because I was born in* Helvetia*, that I am rude, and understand or know nothing; also, that being one Letter more than a Physician, I rove and wander about from one Region to another: Therefore I purpose in this small Treatise to discover and lay open to the World, ignorant and unexperienced men; also that in the first Age good Arts were in being; and what your Art is able to effect against mine and mine against yours, and what is to be judged of either, and how Posterity in the Age of Grace will imitate me.*

Consider Hermes*,* Archelaus*, and others in the First Age, what* Spagyrists *they were, and how great Philosophers. That they were such, is witnessed even by their Enemies, who are thy Patrons, (or Idols rather at this time) O Sophister. But if this had not been testified by your Authentick Fathers and falsly-reputed Saints; yet the ancient* Smaragdine-Table *discovers more of Art and Experience in* Medicine*,* Alchymy*,* Magick*, and other like Sciences, than can ever be taught by you and all your Tribe. If from the Precedent you do not yet understand what, and how great Treasures these be, tell me why no Prince or King was able to subjugate the* Egyptians*? Then why did* Dioclesian *the Emperour command all Books of Chymistry (how many soever they were he could come by) to be burnt? For their Books being destroyed, they were long since compelled to bear such an intolerable Yoke, as will in time fall upon the neck of thee and thy Collegues, O Sophister.*

In this Middle Age the Monarchy of all Arts is at

length derived to me, Theophrastus Paracelsus*, Prince of Philosophy and Medicine; for unto this am I chosen by GOD, that I may extinguish all Phantasies of devised, putatitious, and false Works, and presumptuous Words, whether they be the Placets of* Aristotle*,* Galen*,* Avicen*,* Mesue*, or any other Follower of them. And my Theory proceeding from the Light of Nature, shall never fail through its unconstancy, nor be changed, but begin to flourish in the 58th. year of the following Age. Then the Practice following, it shall be proved by admirable and incredible Signs, so as it shall be openly manifest to Mechanicks and the Common People, how constant and unmoved the* Paracelsick Art *stands against the Trifles of Sophisters; in the mean while that Sophistick Art hath need of Papal and Imperial Privileges, to strengthen and uphold its Impertinencies. But whereas I am by thee, O Sophister, accounted a Beggar and Vagabond, the* Danube *and the* Rhine*, I being silent, shall answer for me to thee. Often hath those impertinently-devised Calumnies of thine against me, displeased many Princes and Earls, also Imperial Cities, Noblemen, and Knights; for I have a Treasure in a certain City of* Forum Julij*, called* Weiden*, hid in the Hospital there, which neither thou* Leo the Roman*, nor thou* Charles the German*, with all your Substance, are able to purchase. Although a signate Star fell upon the* Arcanum *of your Names, yet it was known by none but the Sons of the Divine* Spagyrick Art*. Wherefore since, thou Verminous and Lowsie Sophister, judgest the Monarch of Secrets to be an ignorant Fool and prodigal Decocter, I will now, in the middle Age, openly discover (as an honourable prosecution of those things I have asserted) the Virtues and Preparation of that Tincture, for the profit and honour of the Lovers of Truth, and that the Contemners of true Arts may be reduced to Beggary. The latter Age will be illustrated and honoured with this* Arcanum*, as*

the Gift of GOD, and manifest Endowment of the true Spirit, so as from the Beginning of the World the like sprout of Understanding and Wisdom was scarcely ever heard of. In the mean while, Vice shall not be able to suppress the Just, nor the Riches or power of those that are evil, be any Damage to the Upright.

Of Philip Theophrastus Paracelsus

His Tincture of Natural Things, *&c.*

CHAP. I.

I *Philip Theophrastus Paracelsus Bombast*, say That (after the manifestation of Divine Grace) many waies to the Tincture of natural things, were found out, which did all finally tend to the same scope and end: For *Hermes Trismegistus* the *Egyptian* set about this Work, according to his own Reason. *Orus* the *Grecian* observed the same Process. *Hali* the *Arabian* persisted in his own order; but *Albertus Magnus* followed a Process very prolix. Every one of these proceeded in his own manner, yet they all attained to one and the same end at last, *viz.* to long Life, and an honest sustentation and Conservation of the same in this vale of miseries. At this time, I *Theophrastus Paracelsus Bombast*, Monarch of Secrets, am endowed with peculiar Gifts of GOD, *viz.* in such a manner, as every searcher of this high natural Work must needs imitate and follow me, whether he be an *Italian*, *Polonian*, *French-man*, *German*, or whatsoever he is, and whosoever he is. Hither must you all, Philosophers, Astronomers, and Spagyrists, how high soever you be, come after me. I by my own immense Labours, will shew and open to you, Alchymists and Doctors, that corporeal Regeneration. I will teach you that Tincture, Arcanum, or Quintessence, in which the Foundations of all Mysteries and Works

are latent: For every man may and ought to give credit to another in those things only, which he hath experienced by Fire. If any one, otherwise than by this experience, offer any thing in Chymistry, he is not to be believed, because the true must be separated from the false by Experience in Fire. Assuredly the Light of Nature was created for this end, *viz.* that by it the trial or Proof of every thing should appear; yet to those only who walk in that Light. With this Light we shall be taught by the best demonstrations, That all those who ever before me entred this so difficult Province, with their proper phantasies and acute speculations, have made trial to their own hurt. Therefore, by my Foundation, many Rusticks have been made Noble-men; but on the contrary, by the putatitious and opinionative Art of those men, of Nobles, many have been transmuted into Rusticks; because they could bear golden Mountains in their Heads, before they had put their Hands into Coals. But first are to be learned *Digestions*, *Destillations*, *Sublimations*, *Reverberations*, *Extractions*, *Solutions*, *Coagulations*, *Fermentations*, *Fixations*, and every Instrument requisite for this Work, is to be known by use, as Glasses, Cucurbits, Circulatories, Vessels of *Hermes*, Earthen Vessels, Balneums, Wind-Furnaces, Reverberatories, and other such-like; as also a Marble, Mortars, and Coals; so may you at length proceed in *Alchymy* and *Medicine*.

But as long as you by Phantasie and Opinion adhere to your Fictitious Books, you will be apt for, and predestinated to none of these.

CHAP. II.

Of the Definition of the Subject and Matter of the Tincture of Natural Things.

Before I come to the Process of the Tincture, it is convenient I should discover to you the Subject thereof; for this was alwaies kept secret (with a peculiar concealment) by the Lovers of Verity. Therefore the matter of the Tincture (here you must understand me in a Spagyrick sence) is a certain thing, which from three passeth into, or remains in one Essence, by the Art of *Vulcan*. But that I may signifie the same to you by its Name; according to ancient use, it is by many called the *Red-Lion*, but by few known. This, by the help of Nature, and the Art of the Artist, may be transmuted into a white Eagle, and of one two be made; yet then the golden splendour shines not so much to the Artist, for they two kept in one shine more. Now, if you understand not the use of Caballists and ancient Astronomers, thou art not born of GOD for the *Spagyrick Art*, nor by Nature chosen for the *Vulcanick Work*, nor created to open thy mouth in *Alchymistick Arts*. Therefore, the matter of the Tincture is a very rich Pearl, and a most precious Treasure, and the noblest thing (next to the manifestation of the most High) and most worthy of humane consideration, that can be in the earth. This is the LILI of *Alchymy* and *Medicine*, which Philosophers have so diligently sought, but through defect of intire knowledge, and perfect Preparation, they attained not to the perfect end thereof. By their Searches and Experiences, a Beginning only of the Tincture is given to us; but the true Foundation which my Collegues should imitate, was left to me; wherefore no man must mix his Vizors with our Intentions. I, after my long Experiences, deservedly correct Spagyrists and separate the false or erroneous from the true, having

by continual Searches found out those things, by reason of which I may justly reprehend and alter many and diverse things. Yet had I found the Experiments of the Ancients more excellent than my own, I would not have sustained so great Labours, as I willingly undertook for the sake, profit, and honour of all good Alchymists, &*c.* Therefore, since the subject of the Tincture is so sufficiently declared, as a more faithful discovery cannot, nor must be made between two Brothers, I will enter upon the Preparation thereof; and after I have posited the Experiences of the First Age, I will also add my own Inventions, unto which, in time to come, the Age of Grace will adhere, whomsoever thou (*Sophister*) from thy own Philosophy in the mean while shalt constitute Patriarchs or Principals.

CHAP. III.

Of the Process of the Ancients in preparing the Tincture; and of a more short way found out by Paracelsus.

Ancient *Spagyrists* putrefied *Lili* for a Philosophick Month, and then destilled from it the humid Spirits, so long as until the dry were elevated: The *Caput Mortuum* they again imbibed with the humid Spirits, and from it, by destillation, often abstracted them, and continued this Operation so long, as until the dry Spirits were wholly elevated. Then they united the abstracted humours and dry spirits by a Pellican together, 3 or 4 times, until all the *Lili* remained dry in the bottom.

Although the first Experience followed this Process before fixation, nevertheless our Ancestors often obtained their wished end perfectly. But they would

have had a more short way of coming to the *Red-Lyon*'s Treasure, if they had learned the Concordancy of Astronomy with Alchymy, as I have demonstrated it in the *Apocalyps of Hermes*. Yet since every day (as Christ spake for the comfort of the faithful) hath its proper Care, the Labour of *Spagyrists* before me was vast and great, which now by help of the Holy Spirit assisting, will be eased and lightned by my Theory and Practice, and declared to all those, who abide constant in their Labours with patience; for I am experienced in the Property of Nature, and know the Essences and Conditions thereof, and the conjunction as well as resolution of the same. Which is the highest and greatest thing in Nature, never yet known to Sophisters.

When the first Age had the first Experience of the Tincture, *Spagyrists* of one simple made two; but afterward, when in the middle Age that Invention was lost, their Successors, by diligent search, at length happened on the two names of that simple, and with one denomination called it *Lili*, as the subject of the Tincture: Then the Imitators of Nature putrefied this matter (no otherwise than as Seed in the Earth) for its due time; because before this Corruption, nothing could of it be produced, nor any *Arcanum* discover it self; and after putrefaction, they abstracted the humid spirits from the matter, until by the force of Fire they were dried and sublimed; that this way (no otherwise than as the Husband-man waits on the Seasons of the year) the said spirits might come to maturity, as one thing is wont to rise and fall after another. And lastly, as after Spring the Summer appears, they incorporated those Fruits and dry Spirits, and brought the Magistery of the Tincture so far, until it should come to its Harvest, and dispose it self to ripeness.

CHAP. IV.

Of the Process of preparing the Tincture of Natural Things*, abbreviated by* Paracelsus.

Ancient *Spagyrists* would not have undergone so prolix a Labour, and made such tedious Reiterations, if they had learned their Work from my School, and in their labour followed the Rules of the same, but would full as well have obtained their end with much less Labour and Charge. At this time, in which *Theophrastus Paracelsus*, the Monarch of Secrets, comes, is the Season of Invention, which was hid from all Spagyrists before me. Wherefore I only say; Take the Blood of a Rosie colour from the Lyon, and the Gluten from the Eagle, which, after you have joined them together, coagulate according to the old Process. Thus you will have the Tincture of Philosophers, which infinite men have sought, but very few found.

Whether thou wilt or no, Sophister, this Magistery is in Nature, and is a wondrous Work of GOD above Nature, and the most precious Treasure in this Vale of Miseries. If you consider it externally, it appears to be that which transmutes some vile thing into another much more noble than it was before. Yet that Miracle is produced by a Spagyrist, because he had patience, and was not weary, and by the Art of his Preparation did corrupt the vile extrinsecal Body, and from thence raised up another and most precious Essence. If thou hast learned, or knowest any like thing by the light of *Aristotle*, or from the Rules of *Serapio*, produce it here, and bring it to light by experience. Now keep the Law of the Schools, as becomes a Lover of Honour, and a Doctor. But if

thou knowest nothing, or art able to do nothing, Why dost thou contemn me, as an irrational *Helvetian* Calf, and accuse me to be a Vagabond Circulator? Art is another Nature, and a peculiar World, as Experience witnesseth and demonstrates against thee and thy Idols. Therefore the Alchymist sometimes compounds certain Simples, which he afterwards, according to his necessity, corrupts, and thence prepares another thing. For so, very often of many, one thing is at length made, which effects more than Nature per se is able to do; as is sufficiently manifest in *Gastaynum*, where of *Saturn Venus* is made; in *Carynthia*, of *Venus Luna*, and in *Hungary*, of *Luna Sol*. Not to mention other Transmutations of Natural things (sufficiently known to Magicians) which bring greater wonders to Light than *Ovid* speaks of in his *Metamorphosis*.

But that you may rightly understand me, seek your Lion in the *Orient*, and your Eagle toward the *South*, which are to be assumed for this Work. You cannot find better Instruments than *Hungary* and *Histria* produce. But if you would deduce that from Unity, through Duality into Trinity, with an equal permutation of either, then you must direct your Journey towards the *South*, for in *Cyprus* thou canst not obtain all thou desirest; yet here we must discourse no farther than at present we have declared. Of these *Arcanums*, which exhibit transmutations, there are many more, although known by few; and should they by the Lord GOD be manifested to any one, the rumour of this Art would not therefore presently break forth, but the Omnipotent, together with it, would give understanding to conceal these; and other things, until the Coming of *Elias the Artist*, in which time nothing shall be so hid, as not to be revealed. You very clearly see (although there is no need to speak

of this here, which may by some be taken in derision) in the fire of Sulphur, is a great Tincture of *Gemms*, which indeed exalts them more sublimely than Nature *per se* is able to do. But this Gradation of Metals and Gemms must in this place be omitted by me, because I have very sufficiently writ thereof in my *Secrets of Secrets*, in *The Book, of Vexations of Alchymists*, and in other places. As I have begun our Ancestors Process of the *Tincture of Natural Things*, So I will perfectly conclude the same.

CHAP. V.

Of the Conclusion of the Process of the Ancients, made by Paracelsus.

Lastly, the ancient *Spagyrists*, by a certain orderly augmentation of fire, long continued, fixed their pellicanate and dry *Lili*, until from blackness, through a change of all colours, it became red as Blood, and with its colour had put on the condition of a *Salamander*. Rightly indeed did they proceed in such a Labour; and it is equal and fit, that every man, who would compass this Pearl, should proceed after the same manner. To declare this more clearly to thee, would be very difficult for me, if you have not in the School of Alchymists learned to observe the degrees of fire, and also to change your Vessels. If you have done this, then you will see, that as soon as your *Lili* shall be made hot in the Physical Egg, it will with wonderful apparitions become blacker than a Crow, afterward, in success of time, whiter than a Swan; and lastly, passing through yellowness, become more red than any blood. *Seek, seek* (saith the first Spagyrist) *and you shall find, knock and it shall be opened unto you.* It would be an impious and

uncomely thing to put Meat into the mouth of so perfidious a Bird. He should rather be suffered to flie out, as I, and all others before me were compelled to do. Therefore follow the true Art; for this will lead thee to the perfect knowledge of That. There is no reason to set down any thing here more amply or clearly than I have already done; let thy *Pharisaick* Schools teach thee what they will, from their own unstable and tottering Foundation, it will not reach their end or scope; but after you shall, as accurately as is possible, have learned Alchymistick Industry, nothing then in the nature of things will be so difficult, but it, by help of this Art, may be manifest to thee. Indeed, Nature her self brings forth nothing to light, which is brought to its highest perfection; as in this place may be seen by the Unity or Union of our Duality; but Man should, by Spagyrick preparations, deduce it to that, unto which it was ordained by Nature.

Thus far have I said enough of the Process of the Ancients, and of my correction of *The Tincture of Natural Things*, as to its preparation.

Now, we having this Treasure of the *Egyptians* in our hands, it concerns us to convert the same to our profit, which is two-foldly offered to us from this Spagyrick Magistery. In the first way, how it may be applied for Renovation of the body; in the second, how it is to be used for Transmutation of Metals: Therefore, since I *Theophrastus Paracelsus* am experienced in both diversly (according as the signs of the Work, both in experience and proof, have appeared better and more perfectly to me than any other) I will describe and propose the same.

CHAP. VI.

Of the Transmutation of Metals by Projection of the Medicine.

If the Tincture of Naturalists be to be used in Transmutation, one pound of it is first to be projected upon a thousand pounds of ☉ in Flux; then your Medicine will be prepared for transmuting the Leprous humour of Metals. This is a wonderful Work in the Light of Nature, *viz.* that by this Spagyrick Magistery or Operation, that which before was such a Metal, should perish, and become another Metal. That renders *Aristotle*, with his evilly-founded Philosophy, a Fool: The Countrymen in *Hungaria* casting Iron for a convenient time into a certain Fountain called *Zipferbrunnen*, find it consumed into a *Ferrugo* (or Iron scurf) which melted in a strong Fire with Bellows, is presently pure Copper, which never more returns into Iron. Likewise, in the Mountain *Kuttenberg* (as it is commonly called) they strein a *Lixivium* from *Marcasites*, in which Iron is presently changed into the best Copper, highly gradated, and more malleable than other natural Copper. These, and many such like, are better known to Simple men than to Sophisters, for these men transmute one species into another; yet these Arts remain for the most part absconded, by reason of the notable contempt of Ignorant men, and also partly by reason of the just Envy of Artificers. In *Istria* I have often brought Venus beyond the 24 (*alias* 38) degrees, so as the colour of Sol could not ascend higher, and it was constant in Antimony, or in the Quartal Examen; this indeed I used in all Cases, as the other.

Although ancient Artists were earnestly desirous of this *Arcanum*, and sought the same with very great diligence, yet very few could after perfect

Preparation deduce it to its end. For the Transmutation of a Minor-Metal into a better, brings with it many difficulties and hinderances; as when Tin is to be transmuted into Silver, or Copper into Gold. Perhaps GOD will have the Magnalia of Nature hid from many Men, by reason of their Sins. For sometimes it hath happened, that when this Tincture hath been prepared by Artists, and they could not bring Projection to effect, that the same (through their neglect and carelessness in keeping of it) hath been devoured by Hens, whose Feathers afterward fell off, and grew new again, as I my self have seen. This way, by abuse, through negligence of Artists, came Transmutation into Medicine and Alchymy. For when they could not use that Tincture according to their own desire, they converted the same to Renovate Men, as you shall hear more at large in the following Chapter.

CHAP. VII.

Of the Renovation of Men.

Some of the first and ancient Physicians in *Egypt*, by this Tincture, lived 150 years. Also the Life of many was produced and prolonged for several Ages, according as we find it clearly recorded in divers Histories, which seems a thing almost incredible. For its Virtue is so admirable, as it extends the strength and vigour of the Body further than is possible by Nature, and Conserves it in that degree so firmly, as it lives safe from all Infirmities. And although it be grown aged, yet it appears as in a youthful Constitution.

Therefore this Tincture is an Universal Medicine, like an invisible Fire consuming all Diseases,

howsoever they are predominant. Its Dose is very small, but the Operation of it most potent. With it, by me, the Leprosie, Venereal Lues, Dropsie, Epilepsie, Colick, Rosy-drop, [*Gutta Rosacea*] and like Diseases, have been cured and healed; also, the Wolf, Cancer, *Noli me tangere*, Fistula's, and other internal Diseases, more certainly, than can be believed; of which *Germany*, *France*, *Italy*, *Polonia*, *Bohemia*, &c. will give a Testimony large enough.

Now, thou Sophister, behold *Theophrastus Paracelsus*, and consider how your *Apollo*, *Machaon*, and *Hippocrates*, natural Physicians, sought this Tincture for resisting Diseases, because all Physicians aim at long Life, and by this Universal, they, for the most part, obtained it, and that very efficaciously; and according to their own Arbitriment, named it the Tincture of Naturalists. For in all Medicine, what can be greater, than such a cleansing of the Body, by which every Superfluity in it, is totally eradicated, and transmuted? The Seed being found, all things are perfect. What profits the evilly founded purgation of Sophisters, since it removes nothing of that, which should be taken away? Wherefore the most excellent Foundation of a true Physician is, Regeneration of Nature, and Restoration of Youth: Then, that new Essence, expels all whatsoever is adverse to its self. For this Regeneration, the Powers and Virtues of the Tincture of Naturalists were strangely found out, and until our time used by true Spagyrists, and absconded as a Secret.

Of VITRIOL.

Nature generates a Salt, called *Vitriol*. This is a

peculiar kind separated from all other Salts, possessing also Virtues different from them. Its Virtues are so many, and so famous, as of right they ought to be described in this Book. For, a perfect Cure of the Jaundice is latent in Vitriol, also of the Gravel and Stone in the Reins or Bladder, of all Feavers, Worms, Falling-sickness, &*c.* And in Constipations of the Body, it is a famous Deopilative: In the mean while of other Virtues in this Chapter to be mentioned, I here am silent. The Description of this is to be directed both to Medicine and Alchymy. For in Medicine, it is an excellent Remedy; in Alchymy it is profitable for many other things. But the Art consists in the Preparation of Vitriol for Medicine and Alchymy. For Vitriol crude, is no such thing. It is like Wood, of which all things may be made. It is profitable for Medicine of the Body; it profits also in Chirurgery, or External Diseases, as the Psora, Tetter, Hereditary Leprosie, and others; where all other Remedies are ineffectual, and as it were dead to the Disease. Vitriol assaults Diseases of this kind powerfully, and cures them fundamentally. Therefore the true Preparation of Vitriol is in a special manner to be known by Physicians. For its Virtues when crude are other, than when dissolved; and other when calcined, than when converted into a green, red, or white clear Oyl. This is the condition of it, that as often as it is reduced into another form, so often it is made a peculiar *Arcanum*.

This confounds all Apothecaries, and Writers, both *Italians* and *Germans*. For this part is such, as it alone *per se* can fill a fourth part of all their Shops, and cure Diseases proportionally. This being present, there is no need of so many Boxes, Pots, Glasses, &*c.* set all of a row, and disposed in order in Shops. It concerns a Physician, not to take care for so many

Boxes, and Beyond-Sea Medicines, but to be circumspect, provident, and wise as a Virgin; since in such numbers of Vessels adulterate Remedies are for the most part contained. If he use the aforesaid circumspection, at his own doors he will find more choice Remedies, against all Diseases, than *India*, *Egypt*, *Barbary*, or *Greece* can afford.

Let every Physician follow this Basis, for it is now known even to plain Country-men, that meer Frauds are contained in those Boxes: Which, as they are for the most part of Wood, so are they that use them Wooden Doctors and Apothecaries: But like with like do very well agree.

Of the Species of Vitriol.

There are many Species of Vitriol, for they vary according to the Pits out of which they are taken. The common Probation of this is, as Coperas is proved upon Iron, but this is not true. The Genuine Probation is, that it be used crude against the Worms, in that manner as we will now explain; and accordingly as it expels Worms, so is it more or less excellent in Medicine. In Alchymy, another Probation by Cuprosity is more available; yet it may also be thus proved. If Vitriol change Iron into Copper, and that speedily, and the same be perfectly well gradated and soft under the Hammer, then is that Vitriol best in Medicine and Alchymy? For there is a Conjunction of Iron and Vitriol, where of Iron it makes Copper good and excellent. Of the best Vitriol the best Copper is made. Let no man wonder, that Copper can be made of Iron by Vitriol; for there is also this virtue in Nature, *viz.* that the Water of Borax makes Quick-silver of Lead. Also experience

teacheth, that *Cachymia's* transmute all Metals into other, no otherwise than as Vitriol changeth Iron into Copper. Nor is Vitriol, only the transmuter of one Metal into another, but there are also other things, which have like effect upon all Metals. The reason why we know not them all, is, because Sophisters pervert Arts for their private benefit, using them only to supply their Purse and Kitchin.

In *Hungary* is a River proceeding from Vitriol, or *per se* consisting of Vitriol, not coagulated into Crystals. If Iron be put therein, and left for its due time, it turns to a Rubigo, or Rust. If that Rust be melted by a Wind-Furnace, it is presently made pure and constant Copper, not convertible into its own Nature of Iron. There are infinite Mines of Vitriol found throughout *Germany*, all which cannot be described apart. Yet the aforesaid Probations are to be used both in Medicine and Alchymy. There is besides these another Probation (not profitable in Medicine, but in Alchymy only) and that is: If the Colcothar of Vitriol do from it self by Fire, give or yield Copper. If it give Copper, then in Medicine it is weak, but in Alchymy strong Vitriol. Likewise the Colours of Vitriol are to be observed: That which is all over blue, mixed with no other Colour, is not so good in Medicine, as that Vitriol, which is (as it were) parted, and all over filled with red and yellow Lines and Veins. What in the Air inclines to whiteness, is efficacious, and fit for the green and white Oyl of Vitriol: what turns to a redness and yellowness is more excellent for the red Oyl. There needs no more to be said touching the Species of Vitriol, than what is suggested by Probation; which every Physician and Alchymist should make, according to the use he intends it for. Lastly, this Probation is never fallacious. If mixed with Galls, or

Oak-Apples, it makes good Ink, then it may be used in all Cases: But if it maketh an aqueous, or waterish Ink, that needeth many additions, it is not so good.

Of the Virtues of Vitriol *in Medicine: first, of it Crude, and its Colcothar.*

In explaining the virtues of Vitriol, I will first speak of the virtues of it Crude, and of its Colcothar. Therefore, know ye, Vitriol is a famous Purgation, in grievous and difficult Diseases of the Stomach. For it sometimes happens, that the Stomach is distempered by Meats and Drinks, and falls into a Diuturnal Disease, which continues unto death, and by depraved Meats and Drinks, it often comes to pass, that the Sick are either contracted in their Members, or die.

Also among Souldiers, through Immoderation, it frequently happens, that burning Feavers, Dysenteries, and other Diseases arise. In all these Evils, the highest, and most excellent Remedy is a Purgation by Vitriol, which rightly and Allegorically is called *Gryllum*. Its Dose is as much as you can take up at six times upon the point of a Knife. If that Operate not, repeat the same Dose, and if not this Dose neither, give it a third time, and it will be sufficient. To the Weak, give it in Wine or Water; but to a strong Man, that is not easily Laxative, in rich Wine. It so exhibited, will throughly purge upwards and downwards. Indeed Hellebore, both the Spurges, Coloquintida, *&c.* do famously purge also; yet not with virtues equal to Vitriol. The Reason of this is, because in Vitriol is a certain sowreness, which hath a conjoined Sharpness, Acrimony, and Detersion; by which saline sowreness the Operation obtains a full and perfect power, which neither Hellebore, nor

Coloquintida, &c. hath. For the Nature, or way of Purgation is here two-fold: One purgeth *per se*, the other by Saltness. Therefore here the two virtues are better than the only one in Hellebore. In Saltness a Specifick Form is latent, and that of such a Nature, as all Worms touched by it die. And that is a singular power, which destroys Worms, being what none of the aforesaid doth. Therefore it is evident to every one, that a Purgation, which hath in it self sowreness and saltness, together with a Laxative virtue, doth in a double way and manner exquisitely cleanse, evacuate and purge. Wherefore, for Internal Diseases, it is twice more noble, and more excellent than other Purgations. But because I intend at large to declare to you the Nature of Vitriol, there is no need I should also explain those Internal Diseases: Yet in general I say, that a Purgation of this kind in all Vices of the Stomach, in the Falling-Evil and Vermination, is most profitable and most safe, if it be used according to the condition of time, Disease, Person, &c.

Touching Colcothar you are to know, that it is not inwardly to be taken, but only to be applyed in Chirurgick Diseases, *viz.* in putrid Ulcers, which admit not of Sanation: For in these it discovers the way to perfect healing. Yet there are many Chirurgick Diseases, as Grievous, Malignant, Worse and Worst. Against the Worse and Worst, Colcothar is not conducent, yet is effectual against those, which consist in the first degree; and therefore to be applied to them. For the Worse and Worst of all, its Oyl is to be used according to the degree of the evil, and of the Oyl. All Ulcers of this kind, how many soever they be, are cured by Vitriol; but according to the degree, the use of it is, that it be reduced to good Colcothar, which must be certain times extinguish'd in Vinegar; and being dry, be sprinkled on, or

permixed with some Plaster, which by the Physician shall be judged apt and fit for that evil. So it makes an Escar, which taken off by Fatness, a good and easie Cure follows. But the Evil, which is not obedient to this Cure, of it you shall thus judge, *viz.* that there is yet more venom latent, which must thenceforth be searched out with Oyls applied; because the Basis of the Ulcer cannot sufficiently be amended with Colcothar for an intire Sanation. If crude Vitriol be dissolved in Vinegar, and the Solution thickened with Colcothar into a Powder, and so applied, it soon cleanseth the bottom of the Ulcer much more potently, than of Colcothar is said. But the best way of reducing it to Colcothar, is to extract the water thereof, and therewith to imbibe the *Caput mortuum*, until it be consumed, afterwards to dry it leisurely in the Air. If this be used, it induceth a better bottom in Ulcers. But whatever you do, mind the degree of Ulcers, Tetters, *&c.* Whatsoever of these is not cured, set about the Cure of, with its separated Oyl and Water of which afterwards.

Although Colcothar answer not the desired end, yet by reason of that the Cure must not be despaired of, but you must think of correcting it in distilling. For by Preparation the Medicine is brought to the highest degree, so as it even cures all Ulcerous Affects, as the Wolf, Cancer, and the like. These are explained more at large where we speak of the Preparation of them.

Of the Water of Vitriol *in Chirurgick, and Internal Diseases.*

Alchymy discovers many excellent Arts to Physicians; by which, wonderful Sanations of many Diseases are

made. For this cause in the beginning of Medicine, Physicians always used Alchymy; because this was the Mother and Genetress of many Commodities. These two Faculties, [*viz.* Medicine and Alchymy] as *Sociates* so long kept together, as until Deceivers and Humorist Sophisters arose, who mixed Venom with Medicine, and made her a Strumpet. Such Medicine as this, will always remain, as long as Humorists live. These things I thought good to premonish you of, that henceforth you may give the more diligent heed to this head Chapter, by reason of its famous Medicinal Utility.

But this is always to be premised, *viz.* That as often as unskilful Men take in hand any Art, so often do they every way defile and corrupt it, and of a Pearl make a stinking Puddle. The very same is also committed in Vitriol. At first, the Spirit from Vitriol extracted, was wont to be gradated to the highest. By this exalted, the Ancients did perfectly cure the Falling-Evil, whether Recent or Inveterate, both in Men and Women, of what Condition soever they were. But here unskilful Laborators rushing in, attempted otherwise to reduce the Virtues of Vitriol, and thus failing of the first way and *Arcanum*, they suffered that to expire, and then sought an Oyl in the Colcothar, which could not any way be made to that end, or have such a Use. For what is to take away the Epilepsie must have a subtile, sharp, and penetrable Spirit.

In that consists a faculty of piercing through the whole Body, and of leaving no one thing untouched therein. And by that pervasion, or penetration, the Disease is assaulted in its own place. For it cannot be known certainly and indubitately, whence comes the Seat, or Centre, or Period thereof. Hence we

conclude, that a Physician hath only need of such Remedies, as can penetrate the whole Body. This is the Reason, why sordid Humorists heal none, but prostitute all their Doctrine and Profession. Therefore, I positively affirm, that in the Oyl, which those Laborators seek, is no penetrating Spirit. A meer Terrestreity (as I may call it) is by them used, which penetrates not at all, but where it falls there it lies. Wherefore it is greatly to be bewailed, that the true Process is suppressed by that unskilfulness, and a false substituted in its stead. But I am perswaded, the Devil contrived that, to the end the Sick should not be cured, and the Sect of Humorists might thenceforth spread the more.

Let us return to the beginning; how the Spirit of Vitriol was found out. The Humid Spirit of Vitriol was at first distilled from its Colcothar; then it was gradated, by distilling and circulating *per se*, as the Process teacheth. This way the Water began to be used for many Diseases, both Internal and External, as for the Falling-sickness, *&c.* and thus a marvellous Sanation was effected. But in the extraction they were wonderful diligent; for they took the Spirit of Vitriol corrected, as above, and distilled it from Colcothar eight or ten times, with a most strong fire; so the dry Spirits were mixed with the Humid Spirits, and the Work so long continued, as until the dry Spirits came forth together with the Humid, by extracting. Afterward, both Spirits put into a Phial were gradated to the highest. This Medicine they found to be of much more powerful Operation against Diseases, and by that Medicament effected so much, as they confounded all Humorists in General. Yet here is no Correction added to it (by Artists) by Spirit of Wine, to render it of greater Penetration. But it was of no greater degree, than as I shewed.

Now I will Communicate to you my Process, which I commend to all Physicians, especially for Cure of the Falling-Evil, the singular Cure of which, consists in Vitriol. For which cause, Charity to our Neighbour binds us to institute a more diligent Cure in this Disease. The Process is thus.

I imbibe the Vitriol with Spirit of Wine, and afterward distil it from the dry and humid Spirits: This being done, I find the following Addition to be very profitable, *viz.* If Spirit of Tartar, corrected, be mixed to a third part of the Vitriol, and Spirit of Treacle-water Camphorate, be added in a fifth part, with respect of the Vitriolate Spirits. Thus I administer it, before the assault of the Fit, or certain times in a day. This Medicine is famously efficacious against this Disease; yea, so excellent, as a better cannot be desired from Nature.

Therefore, the first Process invented by the Ancients, is to be retained with the said Correction, *viz.* by imbibing with Spirit of Wine before distillation, and by adding the Spirits of Tartar and Treacle-water after distillation, as is said. For so is attained the Heart of Nature, and every Virtue.

I hope I shall not be blamed, but commended rather by every good Man, that considers the horridness of this Disease, which would even move a stone to Commiseration. Since so great is the vehemency and horridness of this Disease, as almost any Man may lawfully say, Cursed be all Physicians, who passing by such Sick, yield them no relief, but like the *Priest* and *Levite* in *Jericho*, who forsaking the wounded man, left him to be cured by the *Samaritan*. I pray here give your judgment, what Condemnation were that *Priest* and *Levite* worthy of, who passing by the distressed, *stopped their Nose*, as the Proverb is;

surely they were worthy of Hell Fire, from which is no Redemption.

And who can judge any other of all Physicians, none excepted, that look upon this Disease, and yet pass by with their Nose stopt? Who can otherwise say, than that they must render an account of it at the last day? Notwithstanding, all these men are generally so disposed, as they will not wag their hand, or bestow one penny, for acquiring a more certain Foundation for the cure of this Disease. Did they not, as it were, by compact imitate *Priests* and *Levites*, but would rather study to imitate the *Samaritan*, GOD certainly would recompense their fidelity with a manifestation of the Secrets of Nature, with which they might be helpful to the Sick. And if such Virtues were not incited in Nature, the Almighty would undoubtedly create them anew. Therefore I testifie, together with you noble and ignoble men, that all Doctors generally have basely erred and deviated from the Truth. Whatsoever those Seducers, *Galen*, *Avicen*, *&c.* foolishly devised, to that they adhere, and relie upon those Lyes, so far are they possessed with the Devil, that they cannot exercise Charity towards their Neighbours; and in this manner they make themselves the Sons of Damnation; for their only study and drift is to heap up Wealth. The Kingdom of GOD is first of all to be sought, yet not after the fashion of the *Priest* and *Levite*, but according to the *Samaritan* nature. If we be merciful, and follow the example of the *Samaritan*, GOD is with us, who will presently help us with a Remedy not yet created in Nature. In the mean while, since Physicians deal with the Sick *Levitically* and *Priest*-like, the most Wise GOD withholds Medicine, and reserves it to himself. The Sick flie to the Kingdom of GOD, but Physicians to

the Infernal Abyss, prepared for *Levitical* Doctors of the same sort. Therefore open your eyes and look, the way is two-fold, one leads to infernal shades, this the *Levites* follow; the other way leads to Heaven, unto which the *Samaritan* directs his Feet.

That Vitriolate *Arcanum*, and its extraction, is not only excellent in the *Falling Evil*, but is also conducent in other species like unto it, as in *Swounings*, *Extasies*, *&c.* Also it is after the same manner beneficial in all Oppilations and inward Imposthumes, and is no less efficacious in precipitation and suffocation of the Matrix. Yet in it are many more Virtues acquirable than are here commemorated, if greater diligence in inquiring be bestowed thereabout, and Physicians themselves would be better men. But the Devil, whom they serve, possesseth them, and stirs them up to the hating of Him who loves Verity. Even thus things are acted about the Health of Good Men.

It is further to be known, that the aforesaid Receipts of the preparation of the humid spirit of Vitriol cannot more clearly be described; for to understand that, a sufficient Artist is required; those sordid Decocters cannot understand a thing of so great moment. Therefore you are only to expect all-sufficient Information from true *Artists*, and *Alchymistick Laborators*; so also by them you must be fully instructed about the correction of spirit of Wine. For the Doctors of Academies are so very rude, as they can scarcely discern *Agarick* and *Manna*. Yet this kind of Asses are created Doctors. You have Treacle-Water contained in my practice, in the Chapter of the Cure of the *Falling-Evil*; what others there are of this kind, are not here to be recited. By this Chapter you may learn, That the Art and all

Virtue of Vitriol, consists in well-extracting the Spirit, and graduating it to the height, and by addition deducing it to Penetration, whereby it may search out the center, root, and seed of the Disease. For 'tis impossible so exquisitely to find the places, as those Doctors babble of Humours. Certainly, the Foundation is not yet known, as what it is that makes a Disease, or where that lies, or what that is, which casts a man into so grievous a Fit. Therefore every Operation is only to be committed to that *Arcanum*, which Nature hath directed to the Disease; that *Arcanum* searcheth out his Disease, as the Sun penetrates all the Angles of the World. Briefly, I say, whosoever endeavours to be a true Physician, ought first of all to learn to be a *Samaritan*, not a *Priest* or *Levite*. If he be a *Samaritan*, all things he hath need of will be given him; nothing will be occult to, or hidden from him. But to him who will first be a *Priest* or *Levite*, nothing will be given, unless it be Infidelity, which he also had before. Thus are such men paid in their own Coin.

Of the Red Oil of Vitriol.

You are also to understand, how of the *Colcothar* by a Retortive Destillation, in a Chymical manner, a blood-like and most sowre Oil may be prepared. This Oil Laborators have judged more efficacious in the aforesaid Diseases than the Spirit, but that their judgment was erroneous. The vulgar Process of preparing it I think not to mention here; for every thing of moment is cited in manual Operation and diligent Inspection, also in convenient Instruments. As touching the Virtues you are first to understand, that it is a sowre thing, so far exceeding all sowreness, as nothing than it is more sowre. It

likewise contains a corrosive nature, for which cause it had need be used circumspectly and warily, *viz.* not *per se*, but in a good Concordancy and suitable mixture, with respect to that against which it is exhibited. We will explain this by Example: The Viper is a Serpent most venomous, therefore of no use alone, but in Composition it is most excellently useful; for of it Treacle is made. The very same is also to be judged of this Oil, *viz.* That it is not to be used alone, but in a Composition suitable and fit, as of Treacle we have said. By reason of its sowrness, it profits a Stomach free from Choler and an Imposthume; but if either an Imposthume or Choler be present, it is manifest by Experience, that it hath no good effect. For the Imposthume is inraged by it, and exasperated by such sowrness, passeth into an unquiet matter. And if Choler be present, a mutual Ebullition and Strife is caused, no otherwise than as is seen between *Aqua-fortis* and *Tartar*, neither of which can remain or persist with the other. Therefore diligently and circumspectly consider, lest you erre to the damage of the Sick. In Composition this Oil is profitable for other Affects, as in all Fevers and want of Appetite, if given in the aforesaid manner, *viz.* in a good concordancy. There are many other Virtues said to be in this Oil, but Experience confirms few of them. I have seen and proved those to be egregious Lyars, who have boasted, that they could do Wonders with this Oil. It is true, it is useful in the *Stone* and *Gravel*, yet I have known no man cured by it. In all it doth something, but not to purpose: Yet in my Practice, in the Chapter of the Cure of *Gravel*, you shall find a Composition thereof, for this and other diseases. But as I said of the Corrosion of this Oil, used by it self, so I do also affirm, that the same Corrosion hath power of

diminishing or breaking the *Stone*, and expelling *Gravel*; yet that is done with so great difficulty, as there is need of some other Invention, than hath hitherto been practised; for otherwise it may not safely be used. As much as any man hath gained by Experience, so much I allow of. This Medicine is new; wherefore it daily ought to be proved anew, and as oft as need is permixed with new Compositions.

But as to Chirurgery, of this Oil you are to note, It doth indeed excite great dolours, yet it inferrs present Health, even in the most difficult diseases. For in the Hereditary Scab of the Head, called *Achores*, it is so effectual, as it takes the same off in one whole piece, as a Man pulls off an Helmet from his Head. With this Oil the whole Head is to be anointed with a Feather, where it is hairy, for 3 daies continually; then expect its Operation. If you see it not sufficient, anoint it more often, according as the Scab shall be. The same Oil may also be co-tempered and mixed with Water of *Selandine*, and the Head often washed therewith. Yet he who would be healed, must not think that his Cure can be effected without dolour; for the condition of the Sick is the same as of a pregnant Woman, which brings not forth without exceeding great pain. So Meat, without pain, cannot be prepared for us; with dolour and sweat also we are freed from diseases. This way all *Tetters*, *Scabs*, and *Itch*, together with all other Vices of the skin, howsoever arising, are healed; and likewise the depraved *Tentigo*, by anointing herewith, is cured, and the *Wolf* and *Cancer* expelled and mortified; yet in this case you must diligently observe, if the Evil be very forcible (that the Venom so deeply penetrate, as the quick and sound flesh be in success of time like to be eaten away and fall off)

to apply a good *Oppodeloch* for a defensive.

But in whatsoever estiomenous Ulcers, other Remedys be deficient, this Medicine yields relief, by reason of the degree it holds. It will not be improper to mix this Oil with some fat Unguent, and so apply it. This way it will cause less pain, but it is not so swift in operating: *Dolour* can by no means be avoided, no more than a Woman in Travel can be delivered without pains. The best, and most sublime way of preparing this Oil, is to destil it into spirit; so a very small weight will be sufficient in all the aforesaid diseases, which are then removed with little trouble.

These things I have found out by experience of the Red Oil of Vitriol, which in grievous diseases is an excellent and famous Medicine; for fetid and contagious diseases of this kind, as are the *Scab*, *Itch*, *Tetter*, *Achores*, and other like Affects, which are of affinity to the *Leprosie*, may be cured by this great Gift of Nature, which is here offered to the Physician, by which he may effectually cleanse and heal diseased men. There is not an abundance of Remedies of this kind, therefore I will carefully preserve this Oil, *&c.* for all other Coctures are nothing worth, nor do they remove these loathsome diseases, but with their fatness do cause them to be reincrudated and encreased.

Of the White and Green Oil of Vitriol.

It is worthy of consideration, that from crude Vitriol an Oil is destilled by descent, sometimes white, and sometimes green, according to the condition of the Vitriol. This Oil deserves a singular commendation; for since it is prepared of crude Vitriol, therefore it

also contains the spirit of the same, touching which I have above treated. This Oil, made by descent, demonstrates by those its Virtues that it is an excellent and admirable Remedy for the before-mentioned internal diseases. The same Oil whether it be white or green, (but the green is better) if circulated and mixed with the above-commemorated spirit of Vitriol, is a certain and indubitate Remedy against the Falling-Evil, and all its species. But it is worthy your observation, that this disease is seldome so solitary, as not to have other Evils concurrent with it. Indeed, that such a concurrency is, is evidently manifest by all diseases. Hence it is now clear, that a Remedy against the principal Evil is not sufficient, but Secrets against concurrent symptoms are also required. For this cause in my Practise I have designed a peculiar Chapter of the Falling-Evil, not for the principal Remedy sake, which in this place is sufficiently described, but only for the understanding of those things, which concurr together with the first Affect. If other Accidents do not concurr together with the first Affect, there is no need of exhibiting other Medicaments than the principal, which is sufficient. Therefore, touching the green Oil, thus do ye: Graduate it to the highest, that it may be separated from its terrestreity and fæces, in *Balneo* first, afterward in dry Fire. So in *Balneo* the phlegm is taken away, and the terrestreity removed by dry Fire, and the spirit of the Oil only is collected, which in it self is circulated. Afterward you may make addition with spirit of Wine, but there is no need of adding more, if it be only to be used as a Primary Remedy, without Medication of coherent diseases.

It is to be given in Water of Pæony, alwaies before the coming of the Fit, whether it be frequent or

seldome, *&c.* Therefore mind the Paroxisms. As soon as the spirit of the Oil finds out the center of the disease, then the Fit is pacified, and thenceforth waxeth more and more gentle. But when it exerciseth a power of Healing, it first of all excites a *Vertigo* sensible to the Sick, who notwithstanding do not fall nor foam, nor are shaken, or quake, nor deprived of reason, but are seized with a gentle sleep, and are much better presently. At length the *Vertigo* also ceaseth, and the sleep is ended; yet in the mean while the Medicine must continually be applied, several times reiterated, according to the condition of the Disease and Patient. This way the Cure is to be followed, and all things diligently administred. This belongs not to a drunken Physician, or *Doctor Levite*.

Of the Vitriolate Oyl *to be used in* Alchymy*, and also of the Crude.*

Now to speak of the Alchymistick Virtues absconded in Vitriol: I will first propose to you the Virtues of Crude Vitriol: How every Crude Vitriol of Iron makes Copper. For the Alchymist doth not this, but Nature, or Vitriol, by the Operation of the Alchymist performs the same. And this is the sublime power of Nature. And in the light of Nature it is done, but not without admiration; to see any Metal, as it were put off it self, and become another; which is almost, as if of a Man, a Woman should be made. But in these things Nature hath her singular Privilege granted by GOD, for the sake of Man. I speak this of Transmutation, that you may understand, that the foolish Philosopher *Aristotle*, was not well grounded in his Philosophy, but was meerly fatuate. Now I will give you the Receipt, that you may know how, in all places of *Germany*, to make Copper of Iron; whence

we may easily gather, what the power of Transmutation is, and that many other Transmutations may be made; although they as yet be unknown to Us.

To change Iron into Copper is not of so great moment, as to turn Iron into Gold. Therefore, what is least, GOD manifests, but the greater is yet hid, until the *Elias of Sciences* shall come: For Arts also, want not their *Elias*. The Receipt of this Transmutation is thus.

R. Of the Scales, or Filings of Iron (without all other Metals, as Copper, Tin, *&c.*) ℔ j. Quick-silver, ℔ *ss.* Put both into a large Iron Pan, or Pot, and pour on them one Measure of Vinegar, and of Vitriol ʒ *iiij.* Sall-Armoniack, ʒ *j. ss.* Boil them together, and continually stir them well with a Wooden Spatula. If the Vinegar vapour away, pour on more, and add new Vitriol.

By this Decoction, Iron is changed into Copper: If it be made Copper, it all passeth into the Quick-silver, the boiling being continued for ten or twelve hours. After the Cocture is ended, separate the Quick-silver from the Iron (as much of it as is left) and well wash it, that it may be clean. Put that Quick-silver into a Bag made of Leather or Cotton, and press it out; so you will see an Amalgama left. Suffer that Amalgama to expire by Vulcanick Heat, and you will find pure and good Copper. Of this Copper, *R.* ʒ *ss.* of Silver as much, make them flow, or melt them together, and the Silver will presently ascend to the sixteenth degree. This way you may prove, that such Copper is made of Iron: But that the degrees are fixed, is not true. Yet he, who in Regal Cement is able well to operate, may thence receive a sufficient Recompence for his pains. The whole

business consists in the Operation, and in Judicious labouring: Yet in this most men erre. Nevertheless, by the aforesaid Process, you may always make Copper of Iron. I so often inculcate this, only to confirm the transmutation of one into another.

Also of Vitriol such is the Nature, as if the Colcothar thereof be calcined, it with easie liquefaction is turned into Copper. For in it is a wonderful Coppery Nature, and in Copper also a Nature of greatest Affinity to Vitriol. If Copper be dissolved in *Aquafortis*, and Crystallized, it makes every Copper Vitriol, and it is no more Copper: So also of Vitriol, Copper is made; and that is no more Vitriol. Therefore the Reason of such Affinity in Vitriol and Copper is very strange. What is Cuprous or of Copper, makes good Vitriol. So Verdigrease, which is good and highly gradated, gives a Saphyrick Vitriol.

Although it may seem ridiculous for us to discourse of these things; yet it cannot be deny'd, that in Vitriol a Tincture is latent, which is of greater efficacy than many can believe. Blessed is he that understands this. But touching the Oil of Vitriol, further note. If the Oil of Quick-silver, and this Oil be conjoined, and so coagulated in their Process, a Saphire of wonderful Nature and Condition is produced: Not indeed a Saphire stone, but like unto it, of an admirable Tincture; of this I will say no more. Hence it is evident, that stupendous, and to be admir'd *Arcanums* are treasured up in Nature, and in many other things created by GOD, and produced by Nature. Now, it would be more commendable for us to search out these things with an indefatigable labour and study, than to consume our days in Luxury, Drunkenness, Whoredom, *&c.* But at this

time, Lascivious Whoremongers, are in greatest Honour, and so are like to be, until with these Vices one third part of Men be suffocated, and another third part destroyed by Pestilence; so as one part of the World, will scarcely remain untainted, or unconsumed. For with this abomination the World cannot long endure, nor good Arts flourish. Therefore, of necessity these evil Courses must be annihilated and cut off, otherwise no good can have place. But when this evil time is expired, the Golden age shall flourish; that is, Man at length shall use his own Understanding, and live as a Man, not as a Brute, nor act as a Swine, or lie in the Caves of Murtherers or Robbers.

Therefore, since I have communicated to you these things of Vitriol, out of my good affection to all; I do earnestly entreat all Physicians in general, when they shall see the unhappy and miserable sick so afflicted with that most grievous Disease the Falling-Evil, seriously to confider, what GOD the Creator, their own Consciences, and Charity to their Neighbour, command and require of them in such a deplorable State as this; and not contemn, or slightly esteem of the Virtues, which by GOD himself are insited in Vitriol. Let Charity move you night and day to be diligent in these things: Let none be found idle, but every one make it his business to help his needy Neighbour: But be not you deterred herefrom, because Lawyers do not this. Hear what Christ said: *Woe to you Lawyers*. Surely this is not a light Saying. Nor take you any offence at *Theologians*, because they rather seek Rewards and Salaries, than take care for the sick: These are they, which in *Jericho* passed by. Be ye *Samaritans*, and press after the *Samaritan* Virtue: So GOD will conferr on you such profound and necessary Gifts, as in curing the sick you shall be

sensible of no Deficiency. All things you have need of shall be given you, do you only search out this Treasure.

Thus far *Paracelsus*.

An Admonition.

Although all things we have in the foregoing Discourse proposed, touching our *Sal Mirabile*, be consentaneous to Verity; and the Virtues, which we have ascribed to it in Medicine, Alchymy, and various Arts, do powerfully discover themselves, yet we find very much diversity in it, according to the diversity of matter, of which it is made. For, that which is prepared of Vitriol, is of a far other Nature, and endowed with far other Properties, than that, which is made of *Salt-Nitre*. And what is made of common Salt, agrees with neither of these: For one possesseth a greater sharpness than another; yea, this more than that, dissolves Metals. The more potent, are fit for Transmutation and Solution of Metals; the more weak subservient to Medicine; the weakest, and most sweet, profitable for multiplication and propagation of Vegetables.

These things, he who would reap the desired Fruits of his Labours, ought necessarily to know, and consider accurately of. For if any one, in hopes of future Multiplication, committed to the Earth the Seeds of Vegetables imbibed with the stronger Salt, he will indeed never obtain his desired end, nor will

the Earth give forth any Plants, because such sharp Salts do rather destroy, than augment Vegetables. In like manner, Metals are delighted with a convenient Salt, *viz.* with the more sharp, as Vegetables are with the more sweet. Therefore, when we find our labour to be frustrated, we must not impute that to the *Sal Mirabile*, but to our own Unskilfulness.

Indeed these Salts are endowed with far more noble Virtues than we mentioned in the precedent Discourse; but the high Ingratitude of Men of this Age, permit us not to discover the same. For if you communicate your Secrets to those Men, from whom you cannot require a promise of Secrecy; be assured, the knowledge of those Secrets will presently come to others, who will proudly use the same to thy Disparagement.

If you do the contrary, and keep to your self, whatsoever you have purchased by your own Labour and Costs; you will create Enmities to your self. So as which way soever you take, you will sustain loss.

The Consideration of these things, have caused me to resolve to expose my Laboratory, with all my Arcanums, to the view of others. The end of this only was to exhibit to the sight of all, the truth of those things, which I have purchased with indefatigable Labour, and communicated to the World by writing; that this way, the Mouths of the Malevolent and Ignorant may be stopped.

I could, if it were needful, give various other Reasons, by which I was moved to make my Laboratory common to those that desired it.

Now the year is past, in which I promised *in my fourth part of the Prosperity of* Germany, I would build a Laboratory, and exhibit the Wonders of GOD to my

Friends. I then publickly and privately demonstrated various most excellent Inventions, not without labour and very great Charges, all which I value not, since I know, that by this means I have discovered the Truth to many, which they also will publickly own to the honour of the most high GOD, and Correction of envious Detracters.

I did purpose also, in the following year, to continue my Labours for the sake of faithful Friends, but (besides other hinderances) my Age prevented that, Nevertheless, those, to whom I have committed my Laboratory, will perform the same, and exhibit a Light to this blind World. This I was willing to signifie to all, that they may for the future cease to trouble me with Letters.

But whilst I exhibit the Virtues of my *Sal Mirable*, and to it (prepared in Glasses after the above recited manner) ascribe the virtue of changing imperfect Metals into Silver and Gold, I would not have this matter so understood, as if we could by the help of it acquire to our selves Gold in a very great quantity, it is sufficient to have demonstrated the possibility (of Transmutation) and the same to be proved by a small quantity.

It is most certain, that very many Medicaments may be prepared, by the help of it, against various effects of the Humane Body. Also it is most certain, that it is very conducent for a particular gradation of the Minor Metals into better. Believe me, that have experienced the same; if you rightly proceed, you will reap no mean Fruits.

But touching the true Universal, I do question, whether by the help of it, it may be procured. Assuredly, if common Gold, as to its degree, can be changed above what is Natural, Why should it be

judged impossible, to exalt it further, in length of time? time? My decrepid Age forbids me to put my hand to this Work; yet to Posterity (better able than I to sustain the heat of fire) occasion is given, by Prayers and Labour to search further; perhaps, GOD will grant to them, what he hath denied to us.

This Operation, by which we peculiarly draw profit from the Minor Metals, cannot be performed in common Crucibles, as we before said; because they are obnoxious to breaking, and so the Liquors are easily lost; but in such as will not easily break, unless after a long time, and will not permit the humid Salt to run out. Here it will be needful to peruse those things (relating to this matter) which I mentioned in the Third and Fourth Parts of the *Prosperity of* Germany.

To prepare these Crucibles is a great Work, greater to make some Pounds of Salt, or rightly to use the same; but greatest of all, (and in which the summ of all consists) to know what Metals are to be joined, or in what quantity. Here many will have enough to do, and be at a loss, although they enjoy my Secret Furnace, and know how to make the Salt of Art in abundance.

Besides all these, we must needs crack the hard Nut, if we will eat the sweet Kernel. It is required of us to know an easie way of separating Gold or Silver from fixed Metals; for such a Metallick Mass, altogether untameable, cannot be separated by the help of Lead, *per se*, as Ductile Metals; but here is need of another Separation; which is the principal thing.

Nor should any Man perswade himself, that all things are here so clearly written by us, as he can by their literal sence most easily institute the Operation.

For there is need of a long time, and a skilful Master. It would be a very inconsiderate thing to set about those things, of which we have no knowledge.

Although this is my Admonition, here often repeated, yet there will be some, who neglecting it, will set about the said Operation, and perhaps find out various profitable things: In like manner, there will be various found, who following my Prescripts, will reap much benefit from the Minor Metals.

Who can deny, but that *Mary Ranta, a Brittain*, hath Prophesied truly, *viz.* That true Alchymy should flourish in the Year of Christ, 1660? I my self have not seen this Prediction, but have it from the Relation of others, whereunto I refer the Reader. And add, that if such a Prediction were not, daily Experience doth abundantly witness, that egregious things are here and there performed in Metallicks, by help of my *Sal-Mirabile*. And there is no doubt, but that all Darkness will daily more and more be dissipated by the power of this Light.

I have unto some communicated the use of this Light for their proper benefit; but these, contrary to my Intention, have caused what I thought to have kept secret, to be spread abroad in publick and many have hit on the right way leading to Verity. If this be done without my knowledge, what would not have been done, if my Laboratory had been open for a year longer? Certainly the World would have shewed it self other than it is, and altogether new; which the new and great Star extending it self from the South to the West, seems to indicate.

Let the most high GOD grant what are necessary, and salutary for us, turn the Ungodly into the right way, and give to his own Children, Rest and Peace, that his most Holy Name and Truth always to be

magnified, may not be totally suppressed by the Impious. *Amen.*

ANNOTATIONS

UPON THE

CONTINUATION

OF

Miraculum

Mundi.

Explaining and Defending the *SECRETS* therein contained; As also the True *Aurum Potabile* therein mentioned.

It is truly said, that He who builds an House by the Highway exposeth his Building to the judgments of all sorts of men, and to their censure especially who have not skill enough in Architecture, to erect a Country Cottage. The same is wont to happen to

those who write concerning things not common or unknown. For you shall presently hear People saying, *Who knows whether this be true or not?* thereby signifying that they cannot perceive those things which exceed their Capacity; but nevertheless they will not altogether reject them, because they are yet in doubt concerning the truth of them. This their doubting is not to be taken ill, because it proceedeth from ignorance, but not from envy. On the contrary, there is another sort of perverse men, who being puffed up with their own putatitious knowledge, despise unknown things, not out of simplicity or ignorance, but out of a meer diabolical envy to those who have a greater knowledge and experience of things than themselves.

This hath also happened, and doth daily happen to me, especially since the publishing of my *Miraculum Mundi*, in that I have there disclosed Secrets of great moment, of which the Vulgar, nor yet the bubbles of Envy, have plainly no knowledge; and therefore out of meer Envy, reproach them for Unprofitable and False.

But to stop the mouths of such persons, I intend shortly to build a spacious and well-furnished Laboratory, and in it to place a good Laborious Operator, who being occupied therein with continual Labours, shall shew the Divine Wonders to those who desire to see the same. Which being done, I shall have no farther need to defend my Writings against every Calumniator; seeing that I know there will be those (GOD willing) hereafter, who will defend the truth which they have seen with their eyes and handled with their hands.

In this Laboratory shall be seen not only those Artificial destilling Furnaces, and my Press for Wood,

with the circulatory Instruments necessary for the easie making of Salt-Petre; but also those things shall be shewed, which I have treated of in my *Miraculum Mundi*, and its Continuation, yea, and much more than I have there declared.

Those things also which I have ascribed to my *Aurum Potabile* shall be demonstrated to be the very truth, *viz.* That crude Mercury, in an hour or two's time, may be by it converted into pure Gold. Nor shall this only be proved, but also that after my *Aurum Potabile* hath tinged and changed the ☿ into pure and constant Gold, that nevertheless it hath yet great Virtue, *viz.* that any Arsenick, whether white or yellow, being digested in it for some hours, is so changed, that its poisonous quality passeth into a good Medicine, resisting all Poison. Nor doth it only become a powerful Medicine against venomous and incurable diseases, which cannot be eradicated by purging, bleeding, sweating, and the like Remedies, whilst it Tinctureth the evil Humours in the Blood and other parts of the Body, and changeth them into good Humours. But this also being changed into Medicine, and its Venom converted, sheweth its power in Metals; if it be cast upon melted Copper, then the Copper poured out and proved on a Cupel with Saturn, leaveth behind it some good Silver and Gold. These two proofs are sufficient for the defence of my *Aurum Potabile*. But that any one may be yet rendered more certain, after those two Experiments, *viz.* the coagulation and transmutation of Mercury into pure Gold, and the conversion of poisonous Arsenick into a safe Medicament, he may yet try a third, and that indeed incredible, with the same *Aurum Potabile* that hath been twice used, as before, and this not upon mild or slight Poisons, but upon the most dangerous and indefensible both to Men,

Beasts, and all living things, to wit, Mercury sublimate, which being digested for some hours in the said *Aurum Potabile*, layeth aside all its horrid and formidable Venom, and passeth into a safe Purging and Diaphoretick Medicine, and losing its former white Colour and corrosive Venom, it becomes a sweet red Powder, purging out the *Gout*, *Pox*, *Leprosie*, and other detestable diseases, and impregnateth Saturn in some measure with a Golden Tincture. So also white Arsenick, after digestion, putteth off its white colour, loseth its corrosive faculty, and is changed into a sweet and yellow powder.

These Experiments and Proofs ought not to be hidden to the Studious of good Medicines, but to be made manifest to the everlasting and immortal testimony of the Truth, against all ignorant Sophisters whatsoever.

I have, for my defence, the most sharp Sword of Truth, whose edge, if any desire to feel, let him come forth; the defence of the Truth will be grateful and easie to me, although the malice of the whole world should oppose me. I here challenge all those Calumniators who being moved by a diabolical envy, have endeavoured to oppose my most true Writings; let them come forth with their Lyes into the open light, and into the view of the whole World, and shew any Experiment like to those which I here promise to shew, that we may see how filthily or basely they will appear, like the darkness vanishing by the light and splendour of the Sun. If they cannot, as indeed it is not in their power, (*for he that hath any knowledge of things never contemneth a good one*) nor will be possible for them to do; forasmuch as they know nothing, it is but reasonable that for the

time to come they should restrain their virulent tongues, and cease to calumniate those things which they neither know nor understand.

I do not wonder that those Slanderers, attempting the coagulation of Mercury into Gold, have erred, seeing that it hath sometimes happened to my self, that I have erred two or three times together, and could not effect that Transmutation, until the cause thereof was known to me: For if through too much haste the humidity of the *Aurum Potabile* shall exhale or evaporate too fast, the Mercury being dried up, cannot be sufficiently penetrated, nor throughly tinged.

An errour also may be committed, if the glass containing the Mercury and the *Aurum Potabile* grow hot too fast, so that the Mercury with the *Aurum Potabile* boil, and leaps, disperseth it self by too much motion, and exhibiteth it self in form of a powder, when it ought to remain in the bottom, concreted into a round mass. So will he also greatly erre, who shall use Mercury that is not pure and clean, but adulterated, and defiled with many sordes or impurities, which Impediments deny ingress to the Tincture, and render the trial uncertain and precarious. Therefore it is necessary that the Mercury be first well ground with Salt and Vinegar, in a *lignum vitæ*, or Stone or Glass Mortar, and by a diligent washing freed from all its blackness, whereby it more easily admitteth the Tincture. I have found that Mercury very fit for this Operation, which is sublimed by the *Fulmen of Jove*, into which my *Aurum Potabile* hath a swift Ingress, and tingeth the whole of it.

Truly it shews the great ignorance and boldness of those Calumniators, to dare to spread such false

clamours and rumours, saying, *That Mercury cannot be indeed tinged into Gold by my* Aurum Potabile*, but that the Gold which was before in my* Aurum Potabile *applieth it self to the Mercury, and in some sort coagulateth it, but doth not render it fixt and constant.* But this is indeed a very rude and ignorant Assertion, which every one but meanly versed in the handling of Gold and Mercury, is able to detect of Folly.

For if common Gold, dissolved in Water, would readily coagulate Mercury, what should we further seek or desire? But this is greatly wide of the matter, seeing that in all such Solutions the Gold in digestion adheres to the injected Mercury by precipitation, and passeth with it into a white *Amalgama*, the Mercury constantly persevering in its pristine Nature, not admitting the least transmutation into Gold, the which exceedeth not the knowledge and capacity of Rusticks, but is difficult to be understood by those putatitious Doctors, who believe such things to exceed all Belief.

It is well known, that the purest Gold hath no more of perfection than what it needeth for its own defence; that hath not the least power to amend any other metal, and to render it fixt and constant, much less that it can coagulate Mercury, (the derider of all Alchymists and Sophisters) into Gold. Of both is made a white *Amalgama*, but not hard yellow Gold constant in the Fire. He that believeth not me, let him make trial himself, and he shall find it answerable to my words. Besides, all corporeal Gold refuseth solution by fixt Nitre, of which my *Aurum Potabile* is prepared, the which, if it were yet possible, the Gold would not be hid in it, but the solution would be yellow, and would colour the skin with a subrubid or blackish colour, which my *Aurum*

Potabile doth not. Therefore its tinging Virtue consisteth not in corporeal Gold, but in a golden Tincture, from the first *Ens* of Gold, converted into an Astral Essence, by the benefit of Art. By a like reason the *Astrum* of *Luna* impresseth Mercury with the nature of Silver, the *Astrum* of *Venus* transmuteth it into Copper, the *Astrum* of *Mars* converteth the same into hard Iron, the *Astrum* of *Jupiter* of it maketh Tin, and the *Astrum* of Saturn investeth it with the nature of Lead. For Mercury is transmuted into that Metal, whose *Astrum* it shall receive. So the *Astrum* of Mercury changeth all the metals into a running *Argent-vive*, although this transmutation brings little or no profit. Nevertheless, I intend to prepare the *Astrums* of all the metals, and thereby to shew the power of Nature and Art to the studious of the Truth, and so to manifest it to the World. The *Astrums* of metals being extracted from their first *Ens*, they are no longer metals, but their tinging Anima's, which at length with Mercury, become corporeal metals.

This is the true and genuine Foundation, upon which the whole structure of my *Aurum Potabile* is built. Therefore, as pure Gold, cannot render Mercury partaker of its own golden nature; so neither Silver, nor Copper, nor any other metal, will communicate its nature to Mercury, but being precipitated, attracteth it to it self, but in no wise changeth it. Hence the Philosophers say, That the Tinctures of Metals are not to be sought in the metals themselves, but in their first *Ens.* As *Basil Valentine*;

Quod prima Entia non efficiunt,
Hoc Aurum & Argentum non faciunt.

Which is to be well regarded by him who desires

to attain his wishes.

From all these things it appears, that my *Aurum Potabile* being made of the first *Ens* of Gold, by Art, into an Astral Tincture, ought to be an excellent Medicine; as also, that it is such, I have largely demonstrated: For if it were not better than a common Solution of Gold, it would not change Mercury into true Gold, neither also would it have the power of transmuting a most potent Poison into an excellent Medicine. Without doubt, such Medicaments, which by the help of my *Aurum Potabile*, from most violent Poisons, are changed into so salubrious a nature, as Antidotes, do powerfully refill other Poisons and pertinacious Diseases, and may be used in Physick with great admiration. What would it profit, if the Body should be purged by an hundred stools, and at the same time the Disease doth not consist in the matter of stools, but still keeps its place, and gives no way, except it be attacked in its own quarters? Neither will it avail anything to let all the blood out of the body, if the fear of the Disease be not in the blood. Yea, if it were there fixed, and the whole mass of blood wholly corrupted, it would be in vain to undertake to amend the same by bleeding; for all the blood cannot be drawn out, without peril of Life. And if, for example sake, two or three pounds of twenty should be left in the body, to be amended by sanguifying Meats and Drinks, and good Blood to be encreased, yet the event would not be answerable, because the encreasing blood would be corrupted by the former. E. g. An Hogshead of sharp Vinegar, out of which, if you should draw all the Vinegar, leaving only the fæces or Lees, and should by degrees pour into it noble and generous Wine, the Wine would be plainly

corrupted by those few fæces. Even so it is with those fixed Diseases, which have taken such deep root in the humane body, that they cannot be taken away neither by Purging, Bleeding, nor Sweating, nor by outward Anointings. Therefore they are to be tinged and amended in those places, to which they pertinaciously adhere, by the help of Tinctures or Astral Medicines, as above is done with Mercury, and Mercury sublimate, that remaining there, they may put on a better nature and quality, and no farther molest the humane body. And this is the true and genuine way of Curing radicated and incurable Diseases. Yet I would not be so understood, as if I condemned all Purgation; for Purging being used at a due time, brings no small profit. Blood-letting also being seasonably used, wants not its utility; but being often abused, is the cause of great mischiefs, and not seldom hastens on untimely death.

Moreover, the following Experiment, for the trying the Truth of my *Aurum Potabile*, is not to be contemned. Rub some *Argent-vive* upon a small Silver Plate, and what is superfluous, and doth not adhere, wipe off with a Linen cloth, after the manner of Goldsmiths, (or Gilders) who gild with the *Amalgama* of Gold and Quick-silver: Digest the Silver Plate in my *Aurum Potabile*, for half an hour, or an hour, then take it out, and you shall see with how, fair a Golden Colour it will be gilt. For in this digestion the Mercury is not so heated, that it can vanish in smoak, and therefore adhereth to the Silver Plate, and is tinged by my *Aurum Potabile* into the best Gold. Now try the same operation with another Silver Plate, rubbed over with *Argent-vive*, and digest it in a solution containing corporeal Gold, to see if that Plate will be gilt like the other. For the Plate coming out white, you will see a very great

difference.

I could here add more such Experiments, if I thought it needful. If Goldsmiths (or Gilders) could gild their Silver Vessels, by such a coction (or digestion) in a solution of corporeal Gold, without doubt they would soon leave the common way of gilding by the *Amalgama* of Mercury and Gold, because by its poisonous Mercurial fume, affecting the bodies of those who handle it, it is wont to cast them into dangerous and lasting Diseases. But because they can effect nothing by such golden solutions, they are forced to supersede their Use, and to acquiesce in the old usual way.

These few things of my *Aurum Potabile*, which is the Fourth and Last Article in my *Continuation of Miraculum Mundi*, I am constrained to publish for its defence, that every one may know I have not attributed too much to it, but that it can perform much more; the truth of which I am ready to exhibit. Therefore this is a Medicament most worthy to be presented to Great and Noble Men, as a precious Gift.

As for the Third Process in the same Work, which is offered to Physicians and Citizens, that they may by an easie labour obtain good Medicines for Mankind, and an honest livelihood; it is openly and clearly described, so that in it not the least thing is hidden or concealed, I cannot force any to believe or try the matter; I have enough to do with my own affairs; but if in my Youth I could have obtained such a Manuduction, as I have hitherto and still do administer to others, I should not have been forced to the searching out of Nature with so great charge and labours, heavy stinks, and great danger of my Life, as I have. I here again assert that which I have often asserted, *viz.* That by the fulminating of Salt-

Petre with Tin and Mercury, much Gold and Silver is acquired; which thing I have often done, and as yet can do it, and do promise that in due time I will demonstrate it publickly in my Laboratory to Friends. The other point, in which I have taught how Rich men may augment or improve their Gold and Silver, much safer than they are wont to do by putting it to Usury, I have truly and candidly revealed, and have kept back nothing. NB. But that there are other waies of acquiring Riches, without great Cost and Labours at the Fire, the troublesome Exercise of Merchandise, or other things, disturbing or hurting the mind, I do in no wise deny. For the like things are every where obvious, in divers place of my Writings, especially in the 2, 3, and 4 parts of *The Prosperity of Germany*, where mention is made of an Excellent Work, by means of which an honest livelihood may be obtained in tranquility, without noise, meltings, and blowings of Bellows, and that by the help of a certain Water extracting Gold and Silver from Sand, Earth, Clay, Stones, and Minerals, without great labour and costs. And although there should not be at hand any such Earth, Sand, or Stones, which contain Gold and Silver, from which these cannot be elicited by common melting; (yet there is hardly any place in the World, where these matters do not occurr) nevertheless there is no want of Lead and Tin, from which two at all times, and in all places of the World, Gold and Silver, by the help of the said Water of Salt-petre may be extracted; which is an excellent and profitable Art, the which, lest it should die with me, I have already shewed it to some Friends.

I also here promise, that in my publick Laboratory I will shew and demonstrate various Secrets. But let

no man perswade himself that I will do this to all men, without descrimination, or admit every unknown Person to this demonstration, but only those whose Piety and Candour I my self have long known, or such as shall be recommended by them, or other known Friends.

Moreover, besides my publick Laboratory, I will also have a private one, in which shall be shewed to my Friends the more curious and excellent things which I have mentioned in my Writings.

There shall be shewed rare and hitherto unknown Wonders of Nature, as Vegetable and Mineral Plants. As for example.

Vegetables of a Metallick Nature; of which we have spoken in the Treatise of *The Nature of Salts*.

Herbs springing up or growing out of hard Flints, yea, out of pieces of Iron.

Metals in a few hours growing up like Vegetables, by the help of a certain Water; concerning which, see my Description of the Liquor of Flints, in *The Second Part of Furnaces*.

Metals in a few hours space, like Herbs, without the addition of any foreign matter, growing up, so that they lose nothing in the trial of the Cupel.

Also divers manual Operations, and Compendiums not common in the Destillation of excellent Spirits, profitable both in Alchymy and Physick, such are Spirit of Nitre, Spirit of Salt, *Aqua-fortis*, *Aqua-regis*, and the like, by which they are so easily and swiftly

destilled, that with two or three pound of Coals, by a Body and Head, in Sand, every hour may be destilled one pound of spirit, and that so pure, sweet, and clear, that it needs no rectification.

But seeing that this is a thing unheard of, and therefore will be look'd upon by the common Chymists as a thing incredible, I cannot forbear here only to point at the way, by which it may appear possible to be done.

Suppose that I have need of some pounds of spirit of salt, and want the opportunity of preparing it in a long time, by the force of fire, I use the following preparation. Instead of a great and continual fire, I use a separatory Art, severing the pure from the impure, dissolving common Kitchin-salt, or salt-petre, in common Water, and adding to the solution put into a Cucurbit a separatory sulphur. The Cucurbit, with a Head or Retort, (by which also the Destillation may be made) being set in sand, I kindle a fire, by which the water containing the salt may boil, and so by the sulphur, in the boiling, the pure parts are separated from the impure; the purer parts are rendered very fugacious and sweet clear spirits; the grosser, more earthy and fixed salt remaineth in the Cucurbit or Retort, of a very wonderful Nature and Property. And after this manner, from one pound of salt or salt-petre, may easily be destilled one pound of spirit of salt, or spirit of Nitre. From a pretty large Cucurbit, in ten hours, may be made ten pounds of spirit of salt, or spirit of Nitre, which two spirits being mixed together, make an *Aqua-regia*. The quantity of your spirit in each Destillation will be greater or lesser, according as your Cucurbit is larger or smaller. He that desireth to make *Aqua-regia* by the same destillation, must dissolve equal

parts of salt and salt-petre in Water, and destil by a Body or Retort.

This is indeed an excellent Compendium for all those that need a great quantity of those Spirits. Gold, Silver, as also all the other Metals, may be dissolved without *Aqua-fortis*, or *Aqua-regis*, and the like spirits, by the help of certain salts dissolved in water, which truly is also a famous Invention. So also it is with those other rare Experiments above mentioned; as for example, If a metal ought to grow in height, something contrary is to be added to it; for this, while it flieth from its contrary, arising out of the mass, groweth up as well in the dry as the moist way.

If we would have an hard Metal or Flint bring forth an Herb; the Metal, whether it be gold, silver, copper, iron, tin, or lead, are first to be reduced into a tender Powder by salts, and that Powder being put into an Earthen Vessel, is to be moistened with a certain peculiar Water, and the seeds of the Herbs to be sowed or set therein, which after they are grown to perfection, are to be no longer moistened, but the powder is to be exposed to the Rays of the Sun, which again becoming a metal or an hard stone, plainly like to another metal or stone, containeth the inhering Roots of the Herb, and causeth the Ignorant to admire how an Herb should grow out of a piece of Gold, Silver, Iron, Copper, or an hard Flint. This is also certain, and not to be doubted, that the said Herbs so growing out of the Metals, do obtain the nature and properties of those out of which they arise.

Although these Experiments of Herbs thus growing afford no profit, yet they are noble Operations of Nature and Art, having more in them than they

promise at the first sight, therefore I have not here brought them in vain, inasmuch as they are of no small moment.

But that I may here (at least) mention somewhat of this growing faculty of Vegetables and Metals, be it known to every one, that in my publick Laboratory shall be seen the seeds of all sorts of Herbs, and especially of Grain, as Wheat, Barly, Oats, and others, *viz.* by what means they may be so prepared, as to acquire a swift faculty of growing, and that one grain may produce ten, twenty, or thirty strong stalks, with full ears, and fruit an hundred fold.

In like manner shall be shewed to some Friends, how Salt-Petre, as the only promoter and helper of the growing faculty, may be sowed it self, so that it shall recompence the labour an hundred fold; for salt-petre multiplieth it self, and groweth up out of common salt, like other Vegetables; whence that old Proverb of sowing of salt might perhaps take its Original.

It behoveth that I here make mention of yet another wonderful thing concerning the growing faculty, to be shewn (God willing) in my private Laboratory. And it is this, that Gold and Silver do grow, are encreased and multiplied out of gross Saturn, even as the seeds of Vegetables, out of a dunged and salt Earth, so that in fifty ounces there is daily an augmentation of one ounce, if not of two. He that shall be here a good Husbandman, and skilful in ploughing of Saturn, and rendering him fertile, and of sowing or planting in him a fit seed, he will have a plentiful Harvest, answerable to the seed which he sowed, and will easily gain three or four times as much.

Therefore, because the growing faculty of Vegetables, Animals, and Minerals, or Metals, taketh its rise from the only and Universal Salt of the Earth, and this from the Salt of the Sea, and the Sea Salt, from the Sun, if the Divine Goodness shall grant me Life, I will shew to my Friends, how by small labour and charge, the Universal Salt fatness, fit for the rendring all barren and sandy ground fruitful, instead of Dung, may be copiously separated from Sea Salt. Yea if need require, I can easily demonstrate, that also the natural Seed of Gold, the true Universal Medicine may be prepared of the same, or that it may be acquired from the visible Ocean which is known to every Man. But seeing that belongs not to this place, we referr the Reader, desirous of such subtile knowledge, to the Treatise of the Nature of Salts, where he will find those things which will satisfie his desire.

These, and the like Experiments shall be shewn in my Laboratory, among all which, that is the most excellent, by which a Man, without the incommoding of another, and with great quietness and Tranquility, may honestly get his Food and Raiment. There shall be also demonstrated those four *Arcanums* treated of in *the Continuation of* Miraculum Mundi, and many other things treated of in my Writings, which many believe cannot be effected. That so I, by giving an occular Demonstration, may vindicate my Writings from the Injuries and Reproaches of the ignorant, and also leave behind me somewhat for the good of Posterity.

A

TREATISE

OF THE

Nature of Salts:

OR, A

Clear Description, declaring by a perfect Explanation, the Nature, Properties, and use of such Salts as are commonly known, as also of a certain other very wonderful Salt, hitherto unknown to the World; by whose help all Vegitables, Animals and Minerals, without diminution of their weight, or change of their form, may be transmuted into hard and incombustible Bodies:

WITH

A most firm Demonstration that Salt (after God

and the Sun) is the only Beginning, Original, Propagation and Augmentation of all things; from which the greatest Treasure of the whole World; and the greatest Riches may be obtained.

THE PREFACE.

The manifold and various sorts of food, whether prepared of Flesh or Fish, if brought to the Table not seasoned with Salt, are not grateful to the Palate; in as much as they neither exhibit a pleasant relish, nor conduce to the health of the Body. Every man will readily assent to the truth of this trite and vulgar Maxim, if he shall consider with an accurate mind, that among all the Seasonings and Sauces of food, Salt holdeth the chiefest place, and that there is no other equal to it, so that among so many, there is no one to be preferr'd to it.

Therefore what great and excellent Treasures, admirable Virtues, and most worthy Endowments, in which, by diligent search, and inquisition the minds of men may be occupied, are contained therein, I have determined in this present Treatise to enquire into, and declare; inasmuch as for the space of fifteen or sixteen years, I have endeavoured nothing more, than that by all my Labours I might serve the Divine Glory, and the publick good. For by my first endeavours I published a Work, treating of Philosophical Furnaces *in five parts, and I discovered five Furnaces, adapted to the various modes of Distillation; I also shewed the way of preparing (by an artificial manner) excellent Medicines which drive away various and divers Diseases afflicting the Humane Body, which profitable and artificial Inventions, no man before me hath revealed.*

Next follows my Mineral Work*, shewing the Original, and emendation of Metals and Minerals: To which succeedeth my* Pharmacopœia Spagyrica*, in three parts, treating of Vegetables, and by what means efficacious Medicines may be prepared of them.*

Next after these, was my Work of the Admirable Nature and Properties of Salt-petre*, in which is solidly demonstrated, that that Miracle of all sorts, is the true Universal Solvent of Philosophers, which is subservient to the use of all men, high and low, rich and poor. That little Treatise I have called by the name of* Miraculum Mundi*, which I have augmented by an Explication and Continuation, and fenced it with a defence and Apology, against the wicked Insults of Envy and Scorn. In all these I have set before the Eyes of this blind World, the Divine Miracles and Misteries of Nature.*

After this, came out another Treatise, under the Title of the Prosperity of *Germany, in four Books, the two latter of which are not yet Printed, but shall be published in a short time, if God shall prolong my life, which contain very profitable Precepts of the Oeconomy and Administration of things familiar.*

Then another little piece, called, The Consolation of Sailers*; teaching how they may defend and preserve themselves in all long Voyages, as to the* East-Indies *and other parts, against Hunger, Thirst, and other incommodities of that kind, to which they are wont to be Obnoxious.*

Moreover, A Treatise of Tartar, Vinegar, and Spirit of Wine*, shewing their easie attainment and preparation.*

To these I have adjoined, a Treatise of *Aurum Potabile, and another of true* Aurum Potabile*, or the* Universal Medicine*, and other Apologetical Writings, in*

which I have not only set forth the perfidious unfaithfulness of men, but have also revealed many excellent Sciences, that by all these Writings I might illustrate the Divine Glory, and contribute to the benefit and profit of my Neighbour, by giving him as it were wholsom and excellent food, whereby both his Body and mind may be equally refreshed.

And although the said Meats be wholsome, of a good Savour, and contain their own Salt; nevertheless, it seems to me necessary, to salt them as it were afresh, and to season them with a certain Sauce, that they may be tasted with so much the greater appetite and pleasure. And I have so much the more a mind to do this, as I more studiously endeavour to observe that precept of the ancient Doctors, that no Meat should be brought to the Table without Salt. For it was a received custom in former time in well ordered Families, to set the Salt first upon the Table before any other Dish, and not to take it away till all other Dishes were first removed: The which indicates, that Salt is a most profitable thing, and an highly necessary gift of God, therefore of right claimeth the precedency of other Meats in setting upon the Table, and of remaining there, till they are again removed. But that this most Noble and Divine Gift, may the better be understood by the ignorant, and may be made more known than hitherto it hath been, I cannot pass by, but I must indulge my self, as my time will allow, in a few words, and as it were by the bye, to shadow out, and depict its great and admirable efficacy, for the profit of Mankind. But here I shall speak but of few things, and that very compendiously, the studious of Divine Wonders may find the rest in the Writings of other pious and diligent Men, if he hath a desire to know more.

As for the Original of Salt, which is drawn out of the Ocean, as an Universal Storehouse, Writers are divided

into divers parts and Opinions. Some think that those Salt Fountains, which in many, and various places of the Earth break forth from their Springs, and by the help of boiling, yield their Salt, do not take their beginning from the Ocean, but from a Salt peculiarly generated, and brought forth in many places of the Terrene Globe, like Metals. And they establish their Opinion by this Argument; That the Water of those Fountains much exceedeth, oftentimes, that of the Sea in saltness; and on the contrary, the Sea Water being brought by long and tedious Passages through the Earth, necessarily looseth its saltness, and therefore leaving its Salt, it ought to come forth plainly sweet, or insipid. This reason, at the first sight, seemeth so agreeable to truth, that one can hardly think the matter to be otherwise. But most Springs of sweet Water, in their first rise were Salt, which penetrating the passages of the Earth, have deposited their Salt in the same, to nourish the Earth, and that they might come forth sweet for the daily use of Man. Whence they have given rise to so many, and such various Rivers, which again return in that Universal Store-house the Sea, or Ocean, by which incessant and Reciprocal Flux, they are impregnated with Salt, and Communicate the same to the Earth, that it may never labour under a want of due nourishment, but may render Minerals, Stones, Trees, Grass, Beasts, and even Men also, partakers of the same perpetually, and so may serve as well for the Sustentation, Propagation, and Conservation of Irrational, as Rational Animals, the which no man of a sound mind can deny, except he will also deny the Circulation of the Blood in the Body of Man, or Microcosm*, which is plainly unknown to not a few, and will say, that the blood in the little Toe, or little Finger, or left Ear, or other places, doth not arise from the Liver, the Universal Fountain of Blood, but that it is particularly generated and produced by the Vital Spirit,*

in those very parts, which savoureth not a little of Absurdity.

Seeing therefore, that the constant Circulation of the Blood in the Microcosm*, can be in no wise deny'd, why should not also such a Circulation in the* Macrocosm *be admitted as true? For as the Blood of the Human Body arising from the Liver, diffuseth it self through all the Passages and Veins of the Body, as well small as great, and Conserveth the life of the whole, nourisheth all the parts, and augmenteth the good juices, which are changed into Flesh, Bones, Skin, and Hairs in the Members themselves, and leaving the unprofitable Phlegm to be expelled by the Pores of the skin: So also is it with the Nutriment and Universal Aliment of the great World, while the Salt water without intermission, of the great Sea, or Ocean, encompassing the whole Globe of the Earth, by many small and great passages or Veins, passeth through all the parts of the Earth, and nourisheth and sustaineth them with its Salt, that Minerals, Metals, Stones, Sand, Clay, Shrubs, Trees, and Grass may be nourished and grow, and in growing take their encrease. The rest of the Water being freed from all saltness, is exterminated as a superfluity in the Superficies, and being diffused into various Springs, as well small as great, is expelled, no otherwise than the superfluous sweat of the Blood in the* Microcosm*, by innumerable passages and pores. But that in many places of the Earth, the Water doth not leave its salt, but carrieth it along with it self, that may very well come to pass for divers reasons. For first, the most excellent Governour, by His Divine Providence, hath most wisely ordained and appointed, that a salt water of this kind, which men could in no wise be without, should break forth out of the Earth, and it is thus effected: The Sea-water every where passing through the passages and clefts of the Earth, in some places is dried up by the*

Central fire, and coagulated into hard and great pieces, which being digged up by men, and dissolved by the help of Water, and freed from its fæces, is boiled up in fit Vessels, and reduced into a pure Salt.

But if it happeneth that other Water passing through those passages, findeth pieces of Salt of this kind, it dissolveth so much of the same as it can carry along with it, and afterwards is boiled into Salt after various manners, according to the greater or lesser quantity of Salt it hath carried along with it.

But that one Salt Fountain is richer in Salt than another, the cause of the difference is in the Water, which passing by, doth more or less associate it self with the Salt, and so is made stronger or weaker.

These few things are sufficient for the refelling of their Opinion, who assert, that Saline Fountains do not draw their original from the Sea, but are generated and produced in a peculiar manner in the Earth, by the help of the Stars.

But if this should seem credible, nevertheless it would seem more credible, that the Sun and Stars casting their Rays and Influences into the Ocean or Seas, should there generate Salt, which afterwards penetrating through the pervious passages of the Earth, should convey due nourishment to the same.

This reason may also be assigned of the greater or lesser quantity of Salt in Fountains or Salt-springs, that those passages which receive salt water from the Sea, differ in scituation of place, and are also differently disposed or allotted by the sea-water it self, which being various and manifold (in respect of saltness) differs much in one place from another.

For by how much the nearer the Sea-water is to the North*, it contains so much the less salt, so that*

oftentimes it scarcely holds the tenth or twelfth part of Salt. But the nearer it is to the South *or the* East*, it is inriched with so much the more salt. For this reason, in many places of the* East *and* West Indies*, the sea aboundeth and swelleth with so great a force of salt, that when it is stirred up by the vehement impetuosity of Tempests, it casts out with its surges a copious spume or frothy scum upon the shore, which being afterwards dried by the Rays of the Sun, the Inhabitants are wont to use for the salting of Flesh and Fish. Experience teacheth, that in places of this sort, four pounds of Sea-water yield one pound of salt, and the fertility of those Lands also indicates the great quantity of salt, which without any cultivation or human labour, both Winter and Summer inrich the Inhabitants with most excellent Fruits. But those Regions scituated near the Arctick Pole, or North, do not enjoy so great a fertility, because they want the greater and more penetrating Beams of the Sun, and do not exhibit so great a quantity of Salt, which is the cause of all fertility, and therefore those Regions are denied so large and spontaneous a fruitfulness.*

But that Salt which the Unskilful have been accustomed to have in little or no regard, may be had in greater honour, I neither could or would any longer pass by its due Name in silence, and therefore I have called it the greatest Treasure, and most ample Riches of the World.

Moreover, that I may prove and demonstrate, that this common abject salt, known to every man, (in which the life, conservation, growth, and propagation of all the Creatures consisteth, and which is the beginning and end of all things) doth deserve this title, and that a greater Treasure is not found in the Earth; it will be necessary to do this, that I make manifest the infallible Verity of the Mysteries of GOD and Nature.

But I desire of the unprejudiced Reader, that he will not be offended at the vileness of abject and contemptible salt, nor think that I, in giving this Title to it, and calling it the greatest Treasure and chiefest Riches of the whole World, have exceeded or given it too great honour. For so great and honourable a Title doth of right belong to it, and should as yet be insignized with a greater, if a greater by me could be attributed. And I easily perswade my self, that if those who are captivated by the hunger of Gold, shall see this Book, and read the Title, they will conceive no other thing in their minds, than the description of the great Universal it self, or the revelation of great Riches and massy Treasures, which they will hope to find in this Treatise, never dreaming that poor abject and contemptible salt should be set before them, and therefore will say, What is all this noise about a handful of Salt? Who could have thought that Glauber *would have dared to have given such a Title to Salt? But I earnestly require of thee, my Friend, that thou wouldst patiently read those things which in this Writing I have put before thine eyes, concerning Salt, and that thou wouldst accurately examine them, that thou maist apprehend me to have written the pure and sincere truth. If they exceed the capacity of thy mind, and thou hast not hitherto learned or understood the same from the Books of others, I would have thee to understand that all men have not knowledge of all things, and that the Omnipotent GOD hath left many* Sciences *to Posterity, which he hath hitherto concealed from the proud and haughty. Read over and over the true Writings of the ancient Philosophers, that thou maist know, and throughly know, that those men who have searched the most intimate Penetrals of Nature, had salt in great estimation, to have industriously concealed its Mysteries and* Arcanums *from the ingrateful World, which now in these last times are brought to light, for*

thee and all others, to be received as incomparable Gifts, with a grateful mind.

Therefore Reader bend thine Ears, and open thine Eyes, overgrown with blindness and darkness, attend to those good things which I shall discourse to thee of salt; if thou wilt make trial, and will search them throughly by an accurate examination, whether they agree with God, Nature and Truth, I doubt not, but thy mind will be enlightened with a great light, and thou wilt become as a man renovated; but if with a proud mind thou shalt refuse to learn and understand those things, or scoff or mock at them, thou shalt be reckoned amongst the number of Fools, and perpetually abide in the same, although Aristotle *himself, and all the Professors and Doctors should sit upon thy long Ass-ears, and thou with the same shouldst endeavour as an Ass with a sack to cover thy foolish Pride and proud folly. It is much better for a man to know many things, and measure or estimate himself in his own way or manner, than to know nothing, and bear himself out with the vain pride of his own ignorance. I have never seen any man endowed with true knowledge, who hath preferred himself to others; on the contrary, I have found very many, who being stirred up by envy, hatred, and inhumane malice, do nothing sooner or more readily, than insult and make a mockery at pious men, to whom the Divine Bounty hath granted his Gifts, and as it were, devour them with their Wolf-like Teeth, which diabolical wickedness the Divine Justice in its own time will not suffer to escape unpunished.*

Thus much I was willing to say to the proud Caviller; now therefore attend to those things which I shall speak concerning Salt.

A TREATISE OF THE Nature of Salts, &c.

I. *Of the Nature of SALT.*

That it may be demonstrated in a *Compendium*, how many good things, as first the Tranquility of our mind, the chiefest Temporal Good, the Conservation of our Bodily Health, the great Riches and Treasures, and other things which are necessary for humane use, are latent or hidden in the despicable Body of Salt; in the first place let us hear what our Saviour Christ himself saith, who is the Truth, the Light, and the Life, in the Gospel of St. *Luke*, Chap. 14. Ver. 34. and in *Mark*, Chap. 9. Ver. 50. *Salt* (saith he) *is a good thing.* And in *Luke*, Chap. 18. Ver. 19. *No man* (saith he) *is good, but God alone.* But he calleth his Disciples the Salt of the Earth, and addeth, *If the Earth wanteth salt, it is unprofitable, neither doth it bring forth Fruit.* And Dung it self, without Salt, is of no use. This is as if he should have said, Salt is the most noble thing of the whole World; and yet amongst Fools the most abject and contemptible. Be ye like to this, and do the Will of God, and as Mediators, lead Sinners to GOD, which otherwise cannot be done. *I am your Head, your Master, and go before you; tread ye in my footsteps, follow me, I am the*

Way, &c.

But to return to Salt, we will hear the opinion of others concerning it: There is here no need to cite the Writings of Philosophers at length, seeing they are at hand, and from them it may be manifest to every man, that next after GOD, the Sun, and Fire, they have esteemed it the most Noble Creature, and have given to it Honours as it were Divine. The Heathens would not sacrifice to their gods without Fire and Salt. If you read the Old and New Testament, you shall find that God himself hath commanded to have regard to Salt. In the Gospel of St. *Mark* you shall find that all men are to be seasoned or preserved by Fire, and all sacrifices with salt, and that the Lamp or Light upon the Altar was never to be put out, but to be kept in continual Burning. In the Christian Church, this manner is still observed, that no Infant is baptized, without some Light or Candle be present, and the Priest sprinkles a little salt upon the mouth of the Baptized, with these words, *Receive the salt or seasoning of Wisdom*; as if he should say, *Learn to understand and know God and be not like the Beast, which hath no understanding*. These Ceremonies are observed in some places at this day. The Greek Church baptizeth with fire and water, by that Rite indicating the Holy Ghost to be like to fire, because he warmeth the cold hearts of Men, enliveneth them, and turneth them to GOD. God Himself calleth himself a consuming Fire; and the Holy Ghost hath alwaies appeared in the form of Fire, and shewed Himself to the Disciples of Christ in fiery Tongues. The *Abysini* professing the Christian Religion in *Africa*, under the most Potent King and Priest *Prester John*, baptize with Fire and Water, and make a sign or mark in the Foreheads of the men which are baptised, by Burning. In short, there is not any man

among the Heathens, Jews, Turks, and Christians, who doth not highly value Fire and Salt, of which notwithstanding he knoweth no more than a mad-man, or than a Swine, or an Ox, or other irrational Beasts, which pass their life without understanding. But these two Creatures of God, to wit, Fire and Salt, are one and the same in the foundation of Nature; for Fire produceth Salt, and Salt is again converted into Fire, and Fire into Salt, so that by a mutual conversion they are alwaies changed one into the other. Therefore *Hermes* the Father of Philosophers faith, *That which is above, is as that which is below, and that which is below, as that which is above*; as you may read in his *Smaragdine* Table. The Sun or Fire is above, Salt is below, which is by an easie way rendered combustible, like the sun or fire; as I have taught in many places of my Writings, and all Philosophers, with an unanimous consent, do confess, that the greatest Secret lieth hidden in fire and salt. Hence is the word Alchymy from fire and salt, which penetrate all things, and Fire is the Symbol of GOD, who hath alwaies exhibited himself to mortal eyes, in the form of Fire: But Salt is the Symbol of Eternity, inasmuch as it defendeth and preserveth all things from Corruption.

There are some who determine the Evangelist *John* to have understood Hermetick Philosophy; and there is yet extant an Hymn, composed and sung by the ancient Fathers, in honour of the same *John*, in which occurr these words: *Who maketh Gold of Rods or Twiggs, and Gemms of Stones*. Nevertheless I leave those things to every man's judgment, and here I only say this, That both Heavenly and Earthly Mysteries were known to the Prophets and Apostles.

But although I have never taken in hand so great a

Philosophick Work, nevertheless it is so known to me from the Writings of the Prophets and Apostles, and from the Light of Nature, that by comparing things Divine and Humane, I could easily subject it to the Eye, but that power is not allowed me, and therefore I trust that no man will make an evil Interpretation of what I have said, seeing that thereby I aim at nothing but the glory of God, and the profit of my Neighbour.

There is no need for any man to seek many things from the Old and New Philosophers, seeing that by reading and considering the Divine Writings of *Moses*, the Prophets and Apostles, he may obtain his desire, and may without doubt, in them, find the Stone of Philosophers described, provided he shall have but a little knowledge of Nature. I will say no more, but that the infallible Truth occurrs in those. All these things are to be taken so, that things Divine may be understood in a Divine sence, and Natural things in an Elementary sence, without changing or mixing, seeing that they have no Communion among themselves.

But lest it should seem to any, to be absurd, that St. *John* the Evangelist should make Gold of Sticks or Twiggs, and Gemms of Stones, as the said Hymn teacheth, by an Art indeed great, and to be admired, I have thought it necessary to open and shew to the Unskilful by what means that might be done.

In the first place, this was possible to St. *John*, as he was a man abundantly gifted with the Holy Spirit, and seasoned with the Salt of Wisdom, so that he might perform this action supernaturally, as well as naturally, seeing that he was endowed by the holy Spirit, without all doubt he had also the natural Light in his possession.

But by which of those powers he effected this, is not for us to know, nor doth it behove us to know. But because few will believe that St. *John* wrought the same by natural means, and many not believing in Nature and Art, will only say, that it could never be that Wood should be transmuted into Gold, and Stones into Gemms. And although the later should be in some sort credible, by reason of the alliance or likeness between Stones and Gemms, nevertheless the former, by reason of the great disagreement between Woods and Metals, inasmuch as they belong to divers Kingdoms, they object, exceeds all Belief, and other Objections of this sort, may be found among the Unskilful, by reason of the external species of place. But such things are wont to move no admiration in Philosophers, much less any doubt, seeing that they are not ignorant how great familiarity there is of the Vegetable Kingdom with the Mineral, both which have their Rise from the same Subjects, *viz.* Salt and Fire, which their Anatomy doth clearly demonstrate. And although this may exceed the Capacity of some, yet it doth not thence follow that it is not true. If all things were to be spoken truly and openly, I confess there would be found a very small number of those who rightly understand Nature, seeing that almost all men who have but frequented a School for some years, and obtained any thing of Latin, whether they understand Nature, or are ignorant of her, will be taken for Philosophers, traduce those Philosophers who are illuminated by the light of Nature, with strange Cavillings and wicked Lyes, every where setting forth themselves by their own ignorance. Therefore it is no wonder that the Secrets of Nature should lie hid, and by the ignorant and unskilful of this sort be all taken for Fables and foolish Whimsies, which their Sheeps

Brains cannot reach. But who is able to cure this Evil? Perverse manners are to be left with a perverse World. But that I may prove and demonstrate that it is not altogether impossible for Art to transmute Wood into Gold, I will point out by what means it may be done.

First, Then it is manifest before all things, that all Wood and every Herb hath its original from a certain sulphureous salt, to which Metals also owe their Rise and greatly agree in similitude, and by an intimate agreement in the same name; so that how easily a Mineral suffereth it self to be changed into a Vegetable, and that again into a Mineral, I have signified in other places of my Writings. Indeed if you shall look upon the external difference of any Wood or Herb, and a Metal, it will indeed appear great; but being reduced to their first matter, they will not differ in any discrimination; as is manifested in my *Continuation of Miraculum Mundi*.

Therefore if the first matter of Vegetables be adjoined to any metallick seed, this is nourished by that; and again, if a metal be reduced to its first matter, and any Vegetable seed put to it, that will be changed into a Vegetable; which Experience hath often shewed me. But if those two had not a great affinity with each other, they would not so easily admit of a mutual conversion one into the other; the seeds indeed differ between themselves, but they agree in the first matter, which appeareth thus: If a sulphureous salt, not corrosive, be mixed with sand, and moistened with water, and the seeds of divers Herbs sowed in it, for every seed doth thence attract its own nourishment, every one, according to its species, producing its like, endowed with various colours, smell, and proper taste, powers, and virtues,

all which proceed from one only salt, and are manifested by the heat of the Sun, and the operation of the internal Archeus. But to make the matter more clear, it is to be known that the principals of Vegetables are Water, Salt, and Sulphur, from which also Metals take their original, and not from running Mercury, as many think. For that *Argent-vive*, in its own peculiar nature, is also a metal arising from the same three principles, from which the other metals, and all Vegetables draw their original; *viz.* from Water, Salt, and Sulphur, which their Anatomy maketh manifest. Here the rout of Unskilful men will take Counsel to resel this my opinion, inasmuch as it will seem worthy of credit to few. But the cause of this incredulity is the rudeness and unskilfulness of men of this sort, who having no Experience in Natural things, nor in no wise enlightened by the Light of Nature, are blinder than a Mole.

Those things which hitherto I have so often, and with so many words inculcated, the same I here repeat and affirm, to wit, That a Metal may be converted into a Vegetable, and that again into a Metal, and that no Vegetable is found, from which a natural and yellow Sulphur, in all things like to the Mineral, may not be prepared; and this Sulphur prepared of any Vegetable, if it be adjoined to any fixed metallick Sulphur, it is maturated by the same, into a metal, yet not without a *medium*; as I have often indicated in my Writings, and that *medium* I have said to be Salt. Therefore whosoever knoweth how to adjoin any immature sulphur, whether Vegetable or Mineral, to any ripe Metal, the fixed and constant sulphur of Gold and Silver, will be nourished and encreased by the Vegetable or Mineral sulphur, not fixed, and will transmute that into the species and property of the other, as the Ferment

shall be white or red, in like manner as the seed of any Vegetable doth. So gold and silver may be made of a sulphureous salt, according to any ones will, which nevertheless requires a due time, seeing that a transmutation of this sort is perfected gradually, and by a due heat, as also in the propagation of Vegetables & Minerals it is wont to be done. From these things it appears, that this Transmutation is the meer Work of Nature, which many Experiments which I have made, and yet am able to make, do evidently demonstrate; therefore there is no reason why such things should seem so wonderful or absurd to any.

Whether St. *John* performed the Transmutation of which we have spoken, by the help of any natural Art, or whether he did the same by a Divine Power, we will not here dispute; but let it suffice to have demonstrated that such things may be performed by a natural reason.

For when Wood, Bread, or piece of a Bone; or also any Herb shall be adjoined to its own salt, in due manner of Art, and reduced to its first matter, that salt transmuteth the Flower, Bread, Wood, or Herb into a sulphureous salt, which encreaseth the growing faculty of Vegetables and Minerals. A salt of this sort being mixed with a small quantity of white Flint reduced to powder, and melted in a strong Fire, will give a red and pellucid stone or glass, which if it be kept long in the Fire, it turneth green, and at length black, like a Coal, and acquireth so great hardness, that it may be cut and polished after the manner of other precious stones. Here the desirous of Art may see, that by one and the same way, and in one and the same time, that Gold may be prepared of Wood, and fair and pellucid stones, of various

colours, of white Flints. But that the Eyes of the studious of Divine and Natural things, may be the better opened, I will more clearly expound what the first matter is.

Therefore, as to this first matter, of which we here speak, that of it Metals no less than Vegetables may be brought forth, it is to be known how easily it may be prepared by the help of Fire, and of a certain Salt not corrosive, of Metals, Vegetables, and Animals, and indeed so swiftly, that in the space of three hours a piece of Bread, Flesh, or of any Metal, may be transmuted into a sulphureous salt. The same thing also happeneth in the stomachs of Men and Beasts, in which the Vegetables and Animals which are eaten, are consumed in the space of 24 hours, and transmuted into that sulphureous salt from which they have drawn their Rise. But Metals being too fixed and compact, those stomachs have no Jurisdiction over them, inasmuch as they are not able to reduce them to their first matter, except the same were so reduced before, and so should come into the stomach, opened by a radical solution, and so are digested and consumed like Animals and Vegetables. But what need is there of the help of humane stomachs to perform such things, seeing that Operations of this sort may be perfected by the help of Fire and Art. A moist putrefaction without the help of Fire, performeth the same thing in Vegetables and Animals, in a long Process of time; but in Metals very difficultly, and not except in a very long time. Neither are humane Stomachs themselves alike potent, in reducing every Vegetable to its first matter, inasmuch as they exercise their power only upon those Vegetables which by a due Preparation are first rendered fit to be digested and concocted by the stomach, and reduced to their first matter. For

first they are boiled, roasted, or prepared by some other way, because those things which are admitted into the Body, contrary to humane Nature, exercise nothing but venomous Operations. By a like reason Metals and Minerals refuse to be brought to their first matter in a humane Stomach, seeing that the stomach cannot suffer them, as being averse to humane Nature, but ejects them as a certain Venome, not without great peril of Life. Here I except Gold, which Metal only, being first rightly prepared, doth not refuse reduction into its first matter in the stomach of Man; nevertheless Art doth it more easily and readily. He who knoweth not this Artificial Reduction, must be content with the Natural, which nevertheless is not desirable, by reason of the toil, stink, and length of time which it requires. For which reason it is of less account than the artificial. Some of the ancient Philosophers have indeed (not without reason) used the Dungs of Animals, by reason of the incredible Virtues which they possess. But because we have better and fitter Medicaments at hand, not without reason we omit those, and leave them to them who labour under the want of better; which happeneth to Country people, who being remote from Cities and Medicines, are wont to use Dungs in various Diseases instead of Medicines. They purge the Bodies of Boys and Girls with Mouse-dung, Horse-dung, and Goose-dung, being dissolved in Wine or Beer, and strained through a Linen Cloth, they use in curing the Falling-sickness by Sweat. In the Cure of an *Erysipelas*, or *Burns*, or *Scalds*, they use Hoggs-dung; and in all kind of *Swellings* Sheeps-dung; in a *Quinsey* white Doggs-turd, or Humane dung, as also to other Diseases of the Neck, which the rude and ignorant are wont to drink against various inward and outward defects of the humane Body.

I remember once to have seen an admirable Cure done in a moment by the help of humane dung, in a certain, long, and tedious Disease, which it plainly and swiftly removed, drawing those into admiration who were ignorant of the reason of so swift a Cure. He that understandeth the nature and properties of Dung, will easily perswade himself, that wonderful things may be effected by the same. The reason is ready, because humane Dung is nothing else but Bread and Flesh, reduced into their first matter, all their Bonds being loosened, and rendered fit for the exercising of their Virtues; and from humane Dung is elicited, without any great difficulty, a natural Burning, and like to Mineral Sulphur, of which being mixed with Coals and Salt-petre, Gunpowder is wont to be made; as also a certain Salt, not much unlike the *Sal Enixum* of *Paracelsus*. And both those, to wit, that Sulphur, and that Salt, the Humane dung containeth in it self; the which may put forth their wonderful Virtues, by admirable Operations, I think may be doubted by no man. Put a piece of Gold for a time into Humane dung, and afterwards cleanse it by washing, you shall find it equally yellow, as if it had lain in a Lixivium, in which common Mineral Sulphur had been dissolved. And that yellowness adhering to the Gold [*or rather Silver, for the better distinction*] is but the Vegitable or Animal Sulphur arising from the Food which the Man hath eaten.

This I say is the cause that the Dungs of Men and Beasts produce so great effects, which Bread and Flesh otherwise cannot produce, before they are reduced into their first matter. Nevertheless, I do not therefore admit them of value in Medicine, but only shew whence they have their Virtues of resisting Diseases, that by this means I may assert Vegitables, Animals, and Minerals do highly exercise their

Virtues, when they return to their first matter, not that it is at all necessary to be done in the Stomachs of Animals, seeing that the Operation of the fire alone serveth for this reduction.

In what manner soever this first matter be made, whether by the Stomachs of Animals, or by the Operation of fire, there is no great difference, only that which is made by fire is purer, and not so stinking, as that which is done by the Stomachs of Animals, although in gilding of Silver, they are found to be equal, and obtain a Sulphurous nature. And hence it appears, that there lies hid in Bread, and in Flesh, a fugacious and spiritual Gold. And for this reason I conclude, that in all things of the World born of Salt, and brought to Maturity by the heat of the Sun, there is necessarily reconded a fugacious Volatile, and spiritual Gold, yet in greater quantity in one subject than another, but not manifested till the body containing it, by the help of art, returneth to its first matter.

The which Art, seeing that it is out of the reach of Rusticks, it is but reasonable, that they should make use of Dungs, without any ill interpretation. For in the greater, and more powerful Virtues to be produced, Dungs are found more potent than those things from which they proceed. Bread, Wine, Flesh, and the like things destinated for the nourishment of the Body, are not Medicines, but only Nutriments, from which, after an Animate Body hath separated its Aliment, that which is left, obtaineth Medicinal Powers and Virtues; and did I not fear that this dungy discourse should lead me too far from my purpose, I could declare things to be admired of Dungs. For Metals also being prepared but once by the help of Animals, may be wonderfully Converted,

and reduced to their first matter, although it is in no wise necessary that we should take that way of doing it, seeing that an easier and better way is at hand, than that by the help of Animals. But he that is ignorant of this artificial Conversion, must be content with the other, till the teachings of experience, shall bring him to better things.

That incredible Virtues are hidden in the Dungs of Animals, *Paracelsus* at some time declared, in the presence of some Noble-Men, to some Unskilful Physicians, who being moved with anger, departed, thinking themselves to be highly reproached by *Paracelsus*, because they had asked of him some great Medicinal Secret, and he had set before them Humane Dung. But without doubt, he would have shewed them great Secrets hidden in such a matter, which exceeded their dull Capacities, but not the incomparable Ingeny of *Paracelsus*, who without doubt had revealed to them those Secrets which himself had found, had they not gone away from him with wrath and Indignation.

In another place of his Writings, he saith in express words, that he that knoweth not his own Dung, knoweth nothing at all, and is a blind Ass, to whom nothing of Heaven and Earth is manifest; which words do plainly prove *Paracelsus* to have been able to perform many things with Dung. But this I assert, that this my Transmutation, and Conversion of things into their first matter, doth far excel that which is done by Dungs, in as much as being endowed with a greater efficacy, it appeareth not in the species of Dung, but of a Sulphureous Salt, and may commodiously be used by all Men, and in all Diseases. Its Virtues are not restrained to any particular Disease, but operate generally, not only in

all Humane Diseases, but also in all Infirmities and Defects of Vegetables and Minerals, as I have shewed in other places of my Writings. What I have here spoken of Dungs, I would not have any think that I have done it to the end that I would have them used in Medicine, but for this reason, that I might shew the great difference between an Herb as brought forth by the Earth, and that which being first digested, the Animal Stomach hath freed from its Bonds, and reduced it to the operation of its hidden Virtues: The which I have very clearly proved by the Dungs of Animals. Therefore the expert and learned Physician, setting aside all Dungy Medicines, may by the Spagyrick Art, reduce his Herbs to their first matter, that is a Sulphurous Salt, and may perform by Salts of this sort, more and greater things, than by the unprofitable, and destitute of all Virtue, Barks, Shells, and empty Husks, which a multitude of Physicians are accustomed to use at this day. I have thought fit to expose to the light these few things, concerning the first matter of things, and Dungs, which are not distinguished, by any great difference: But let us return to the matter it self, and see how fairly the light of Nature shineth from the Divine Light.

As God formed the first Man *Adam* of the Earth, and breathed into him a living Soul, and placed him in Paradise, and the Devil withdrew him from God, and Precipitated him into Eternal Damnation, using the Serpent as a Mediator: So also, Man who fell from his Creator, being deceived by Satan, by the Divine Serpent and Mediator, to wit, Jesus Christ, was again to be reconciled to God, which could no otherwise be done, and God permitted it so to come to pass, who otherwise might have bridled the Devil, so that he could not have seduc'd a Man, and also

could have kept Satan himself in his Angelical Estate, that he should have had no hatred against God or Man. Now this Philosophick Elementary Secret may be compared, in all points, to the Heavenly Mistery. For if the Elementary Sun, in the separation made by God, in which he lifted himself on high from the rude and formless Chaos, had not ejected his earthly and corruptible Sulphur, and sent it down to the Abyss of the Earth, the Rays of the Sun, when they now penetrate the Earth, would not be hindered to Communicate with the Solar Progeny or Issue, so that the Bowels of the Earth would produce nothing but Gold; and the other Metals, *viz.* Iron, Lead, Tin, Copper, *&c.* should not be, which nevertheless are brought forth impure owing their received impurity to that impure, stinking, and earthly Sulphur, which is mixed with a Metallick Body in the Bowels of the Earth.

But to help Metals infected with a Sulphur of this sort, that they may become like to Gold, as the Son of the true Sun, it is necessary that Sol should humble his Son, to wit Gold, and suffer him to put on a Saline nature, whereby he may become the Medium of reducing radically the imperfect Metals to perfection. Salt is the only Medium of reconciling Gold to common Sulphur, and of making of it a Tincture, changing the imperfect Metals into perfect, of which all the Philosophers, whom few understand, have written so clearly.

Concerning this matter I have written very clearly in a Treatise, which I lately published, describing a Saline Water, or *Aurum Potabile*, which certainly containeth a great Mistery, although very many can neither understand or believe it. For because it wholly tingeth Mercury, it cannot be a solution of

common Gold, because no Water, nor no Liquor prepared of Corporal Gold it self, can give to Mercury a constant Tincture. It may indeed be done that Gold dissolved, may adhere to argent vive, or that to Gold, so that both may pass together into a white Amalgama: But that such an Amalgama should become yellow and hard, or the *Argent vive* transmuted into Gold, will never happen, although it should be digested or cocted an hundred years in such a Golden solution. For the snowy whiteness of Mercury never suffereth it self to be tinged or coloured by common Gold, but is obedient to any tinging and coagulating Sulphur, concerning which in the Appendix to the Continuation of *Miraculum Mundi*, more things are declared. Let these few words be well examined, in which will be found a great Mistery; to wit the whole Philosophick work it self, provided the light of Nature shall a little shine. Nevertheless this is not so efficacious, as that it can reveal such Misteries to a Man who wants Venus to open his Eyes, with which he may behold the light of Nature. For without God, there is no light, and without light, no life, no Understanding nor Wisdom; Obscurity is Death, and Death Eternal Destruction.

Salt speaketh thus of it self; *I am fire and life, and no Combustible Sulphur can be made Gold, except I be the Mediator*. Salt is the only Medium between Combustible and Corrupt Sulphur, or the imperfect Metals, and Gold. The pernicious Sulphur or Satan, which lieth hid in lean Death, is first to be vanquished and overcome in Hell, then arising a Glorified Body, it occupieth its Royal Throne, and Converteth the Diseasie Metals into Gold.

But to delay the Reader, burning with a desire of Divine and Humane Mysteries, no longer, I will

describe the whole Operation in a Philosophick manner, briefly, clearly, and truly, as I have oftentimes done it with my hands, but never yet, by reason of various Obstacles have brought it to a due perfection.

To the common Salt of the Earth well cleansed, adjoin a Terrestrial Sulphur in a due weight, the injected Rays of the Sun being first received by the Salt; the Salt and Sulphur will fight in Hell so long, until the Salt overcometh the Devil and Death, and ariseth a Glorified Body, by which its sick Brethren are to be Cured, or Converted into Gold.

This is the whole Operation, in which nothing is omitted, but the weight, and the name of Satan or Death. But the name of the Salt I have already manifested, and nothing here remains, but that I should express the name of Satan and Death, which for the Glory of God and Profit of my Neighbour, I will not conceal.

The Death and Devil of all Metals, is that Combustible Sulphur, which having its seat in all things, is equally in Vegitables, Animals, and Minerals. Conjoin Salt and burning Sulphur, and cause them to fight until the life (that is Salt) shall overcome and swallow up the burning Sulphur, which is Death, and from both will proceed a Glorified Body, like a fair Ruby, or pellucid and red Carbuncle, by which the Diseases of Men and Metals may be cured. In this manner of operating, delivered in few words, lieth hid a mistery of great moment, which one of a thousand will scarce understand, and by reason of the vileness of the matter, it will be to many offensive, and contemptible. But we will have no regard to Fools, blinded with their own folly and madness, who seek good where it is not to be found,

and neither do nor will know it when put before their eyes. If after a Sophistical manner I should have proposed some Chymical Operation with a long and tedious Circumstance of words, I make no doubt, but the blind World would more readily have received it, than a short and compendious way of operating of this sort: Whence *Sendivogius*, and other true Philosophers, have not said without cause, that if the true manner of Operating should be revealed to any man, nevertheless, by reason of the vileness of the matter, it would not be believed. For this reason, some will object; I pray what good is like to be in so vile and abject a thing as Salt? And when was Sulphur wont to be made Gold? Hence also, they neither will nor can believe the truth.

But that I may clearly prove, that there are Secrets hidden in Salt and Sulphur, it behoveth, that I manifest those things more largely. Salt is the Symbole of Eternity, seeing that it is not diminished nor altered, neither by Fire, Air, Water, or Earth, but preserveth all things for a longtime from Corruption. It is a thing well known, and conversant in the sight of all the World, and is a help to all other things, yet wants not the help of any thing. Burning Sulphur is the Symbole of Death, and the true Infernal Devil, which no Element, nor any other thing (one Salt excepted) is able to vanquish and overcome. For although Sulphur not yet freed from its Bonds, being surely kept in its Prison should suffer it self for many years to be tortured by the fire, yet would it not receive any sensible mutation, nor any loss of weight, provided there be no open passage for its Exit. By the like reason, if it should abide an hundred years, in the Air or Water, yet it would in no wise putrifie. Salt only overcometh it, and changeth it into a Carbuncle; I say into a Carbuncle, so called,

because shining with a pellucid redness, it sheweth like a burning Coal, and for its excellency may be accounted among Precious Stones. It is found by few, but they who have it in possession, hide it, nor do they expose it to Sale like Diamonds, or other Gemms. It is not digged out of rough Mountains, as others, but is sought by Prayers to God, and acquired by the Labour of the Hands.

But why do I say so much? Seeing that I have already exceeded my due limits, yet I know, that what I have said will exceed the capacity and understanding of the Impious. But that no man should doubt, that salt and sulphur are most noble Creatures, although very lightly esteemed, I will prove that salt is the *beginning and end of all things*. In the Creation of the World salt was first made, from which afterwards the four Elements proceeded, so that by the Philosophers salt is called *The Center of the Elements concentrated*; and by the same reason, by which it was the first, it still is, and remaineth the last. All things arise from salt, and after they are destroyed by death, do again return into the same. *Et sal thesauros grandes & possidet ignis. In Salt and Fire are contained great Treasures.* Salt is Fire, and Fire is Salt, and they contain in themselves a third thing, to wit, an hidden Spirit. When the most Omnipotent Creator had pronounced the word *Fiat*, and had created salt, the *Chaos* was afterwards parted or divided into four portions, and divers seats or places assigned to each, and also each had its Name given to it; which being done, the Elements took their beginning, instituting in themselves mutual actions, and ordaining their generations. The most pure and subtile part became the Firmament, and gave the Sun, Moon, and Stars the more gross and heavy, joined together into a mass of Earth, and like fæces

or dreggs, occupied the lowest place. The watery and airy Portions encompass the Terrene Globe.

Now when the superiour or fiery part, with the Stars operate and immit their powers upon the lower part or Sea, the Water is rendered pregnant, or as it were with young, and generateth Salt without intermission. But lest this continual generation of Salt, effected by the operation of Fire, should be produced in the Sea or Water only, and the rest of the Elements should be idle, God hath also given to each of these its proper Gift, *viz.* to the Air, that it should receive the seed sent from the Stars, and communicate it to the Water; to the Water, that it should distribute the received seed through the passages and clefts of the Earth, that so by this reason Minerals and Metals of every kind might as well be produced within the earth, as all kinds of Herbs, Fruits, and Trees, without it in the superficies, serving for the nutriment, encrease and multiplication of Animals. This thing is witnessed by daily Experience; for if the Sea should not disperse its salt through the earth, so many excellent Minerals could in no wise exist in its bowels, neither in its superficies could not so many and so great Trees nor so various and manifold Herbs, and such divers sorts of Grass, be brought forth. For as much Salt as Vegetables draw to the external superficies, and Minerals to the inward bowels, so much the Sea or Salt-water restoreth to them, so that the Earth may never labour under a want of its salt, of which the Indigent are to be rendered partakers. For if the Sea should not provide for the Globe of the Earth a continual nourishment, the Earth it self being destitute of the same, would not be able to afford a due aliment and encrease to other things. For a Chest which is continually exhausted by taking out, and

nothing put in, at length being empty, retaineth nothing. But because the wise Providence of God hath appointed that the Terene Globe, without intermition, should be fertile in bringing forth good Fruit for the nourishment of Mankind, necessity requireth that a perpetual aliment should be afforded to the Earth, from the Sea, for which end the Stars never cease in animating the Air and Water with their influences, that the Elements, by mutual helps, might succour one another, and no stop or hinderance should be put to the course of Nature. For if one Element only rest, and cease to perform its office, the other would also cease from working, and fall into such a Rest.

Except the Stars should generate Salt, and the Water receiving it, should disperse it through the Earth, by what means should it come to pass, that any thing should be brought forth, grow, and encrease? The whole Orb of the Earth would at length grow dry, and perish, which nevertheless by the perpetual access of salt, never intermitteth, but is encreased and sustained.

There is no Stone which can want Salt, which argueth Salt to be its beginning and nourishment, and that those Mountains, in which is a great quantity of a saline nutriment, do grow and encrease thereby, as receiving it in a plentiful manner from the nearest sea. This is no where more easily to be found, than in those places in which the Mountainous Coasts are very fertile and fruitful in Metals, for the acquiring of which the Rocks are to be digged through with holes in height or depth, affording a commodious going in and out. But when in places of this sort all the Metals are dug out, or the metallick Veins are broken off (& lost) from the

transverse Walls, or sides, or also from the sliding or dropping Waters, they are rendered unprofitable; and for that reason such a Mountain is to be deserted; nevertheless it doth not cease to grow, and indeed as well the Stones as the Metals, having their seat in it. Whence it is wont to happen, that those holes or passages abovementioned, through which one might have walked upright, in a long process of time, do so grow together, and become so little and strait, that he who desires to go into the most intimate Penetrals, must stoop even to the ground. This is to be understood of such sorts of Stones as abound with salt, for places not passable by salt, are found to be fit neither for the generation of Stones, or of other things, as also those which refuse to admit Water: For Water is the Vehicle which carrieth Salt through the whole Globe of the Earth, and by it disperseth its nourishment, as the Air is the Receptacle of the Astral seed, of which the Water is to be rendered a partaker.

Those things which I here write, altho' they may seem to be vile, and of small moment, nevertheless they are most true, and cannot be rendered more clearly and truly by any man. And altho' the same might be proposed by a more prolix description, yet there is no need of that prolixity, when all things may be delivered more compendiously.

Nevertheless, that I may as yet confirm by a clearer demonstration, that the Life of the whole World is Salt, and that of it all things take their original, I will bring for witness the Universal Opinion of all the Philosophers unanimously asserting, That all things being reduced into their first matter, return into salt; from which Saying it followeth, that they have taken their beginning from

Salt; and this Argument can be refelled by no man.

Now some man may say, How shall I be sure of this? or, By what reason may all things be reduced to their first matter? To obtain the knowledge of those Labours and Operations, it behoveth thee by experience to go to clear Philosophers and Chymists, because I intend not at the present to treat of operations of this kind. Every Countryman taketh notice of the Work of Nature, who seeth daily, that every Herb, every Wood, every Man, and every Animal, after that it hath attained its end by Death, passeth by putrefaction into a sulphureous salt, hidden indeed in a putrefied Dung, but unknown to him, although with the same he dungeth his poor and barren Land wanting salt, and rendereth it fat and fertile. As long as the Herb, Wood, and Animal enjoyeth its own vital Air, it doth not dismiss its salt by which it is preserved, but superfluous fæces. But as soon as death hath taken away the vital Air, and dissolved the *Vinculum* or Bond, the rest of the parts can no longer subsist, every one going out to that place whence it proceeded. Rain dissolveth the salt, and by all Rivers carrieth it back to its Mother the Ocean, from whence it had come forth; the Spirit is attracted by the stars; the earthy matter remaineth in the Earth, to which it oweth its Rise. For the Fruits of the Earth do not obtain this universal nourishment from the Sea, by right of Inheritance, but they take it only as a profitable Aliment, given them to enjoy as long as they live; after death, the universal Mother, to wit, the Sea, taketh it back, and bestoweth it upon others which she hath accommodated to it. If thou hast a mind to make trial of this thing by another way, burn any Herb, Wood, Stone, or Animal in the Fire, for so whatsoever is spiritual flieth into the air, and the salt will remain in the ashes, to be extracted

with water, and separated from the dead earth. Salt therefore in all things is *the beginning and the end*, and most worthy, which is accurately to be noted, inasmuch as it is that which containeth great mysteries and secrets.

He that is ignorant of these things, deserveth not to be called a Philosopher, but rather a proud Ass, knowing and maintaining nothing but slanders and calumnies, with which, to conceal his own ignorance, he cavilleth at the Truth, and bringeth it into contempt. The Ancients were not ignorant of the excellent Virtues hidden in salt, so that many of the Philosophers have thought that something Divine was hidden in salt, and therefore they have expresly written, that the knowledge of God can be drawn from nothing more clearly than from Fire and Salt. Therefore they at all times adjoined to their Sacrifices and Altars Fire and Salt, as Symbols of God and Immortality. They were afraid to touch any Fire or any Salt with unwashen hands, lest they should draw the Divine Wrath upon themselves, if they should defile those most noble Creatures with impure hands: They swore by Salt and Fire, not using any greater Oath; and in any matter to be searched out by a diligent examination, they proposed to the interrogated Salt and Bread, that so he should witness the truth; whence perhaps came that Proverb, *Salem & Mensam, non violabis*. Our Saviour Christ is called The *Salt of Wisdom*. In holy Baptism, the Priest putting a little Salt to the mouth of the Infant, is wont to add these words, *Receive the Salt of Wisdom*; which custom, with the burning of Wax-Candles, alwaies adjoined in Baptism, that Christ might be remembred to be the light of the world, is now in many places abrogated by Innovations; so that it is to be feared, if the world should continue

long, the matter would come to that pass, that it would also be prohibited to name the very Name of Christ. For truly it is already come to that boldness, as to prohibit the Celebration of our Saviour's Nativity, under the injunction of a certain penalty. O the miserable condition of *Christendom* at this day!

Christ himself calleth his Disciples *the Light of the World*, and *the Salt of the Earth*, *Luk.* 19. 9. Salt and Water, by Faith and Baptism unite God and Man: so also fixed Gold and combustible sulphur are copulated by the help of salt and water, which thing, although it may seem impossible, nevertheless it is very well known to true Chymists; for when they are minded to separate melted Gold and Silver, they are wont to inject a little sulphur, which interceding between both, like a Partition wall, disjoineth the gold and silver, by reason of the enmity which it hath with the gold, disagreeing with the sulphur by so great an antipathy, that it can at no time suffer it. Nevertheless salt and water take away this Enmity, reducing both into favour with each other, no otherwise than Christ, the Salt of Wisdom, and the Divine Light, as a Mediator, reconciled the filthy sinner to God.

Christ saith in certain places, *salt is good*, or *it is a good thing*: When the Earth wanteth salt, being dead, it bringeth forth no Fruit; the same is Dung, when destitute of salt.

Here I have the eternal Truth Himself my Witness, reproving my impious *Farnnerian* Enemies, who endeavour to refel my *Miraculum Mundi* with their false Calumnies and Cavils. In which Book I have demonstrated by most manifest Arguments, that the Earth is rendered fat and fertile, not by Dung, but the Salt which is in it. These Calumniators being

convicted by the true testimony of this witness of their shameful Lyes, must without doubt bridle their venomous Tongues, and for time to come, cease to tear me with their savage Teeth. *The Truth may indeed be pressed, but never quite born down*; for GOD at length will bring it to light, although for some time it may be pressed and perplexed by Satan the Father of Lyes, and its capital enemy.

In another place Christ saith, *None is good but God*. Also in another place, *Salt is good*. This is truly a most efficacious testimony, and famous praise, by which Salt is extolled.

Salt is also taken for Understanding and Wisdom, and for that reason a rude and ignorant man is called dull and insipid, and in the same sence a speech is said to be unsavory or witless, as if having nothing of salt, it were unhandsome and stupid; whence the vulgar Proverbs are wont to say, How heavy and insipid is this man? How dully and unsavourily doth he speak? Also that usual saying, *That which relisheth, nourisheth*; and so on the contrary, where there is no savour, there is also no nourishment. There is nothing can be brought forth in the nature of things, without the *medium* of salt; yea, Man himself is not born without the Sun, Man, and Salt. Therefore a certain Philosopher saith very appositely, *The vigour of salt is fiery, and of a Celestial Original*. The sun and salt are the Parents of all things, which procreate all things, and without which nothing is procreated; Bread and Flesh, which are seasoned with salt, afford more Virtues than all other Foods which are not salted. Salt being added to Wine in its fermentation, rendereth it stronger and sweeter.

NB. That nevertheless the salt here spoken of ought not to be common and vulgar salt, which doth

not give a good relish to Wine. Empty Hogsheads may indeed be purged by common salt dissolved in warm water, so that every ill taste or smell may be drawn out, and the wine preserved in its vigour. Moreover salt exceedeth wine in corroborating the heart of Man, and is therefore in many things to be preferred before it. And he that knoweth how to conjoin true salt with wine, and in the same to dissolve the Sun of the earth, (which is Gold) may from it extract a Royal Medicine, as is shewn in other places of my Writings.

For any man of understanding may easily see, that if the noble virtues of these three things Corroborating the heart, to wit, Gold, Wine, and Salt shall be joined together, what a noble Medicine will proceed from such a Conjunction. *Paracelsus* hath not without reason determined with the Philosophers, that no true *Aurum Potabile*, can be prepared without Salt. If there were no Salt in the Earth, neither Herbs, nor Grass would be brought forth for the food of Animals, nor the life of Man sustained. All Animals also do therefore desire the Salt of fruitfulness, concerning which, you shall find more, in the description of my Green Liquor. The Combination of Gold and true Salt, restoreth decaying seeds to their pristine fruitfulness, and also restoreth to half dead and barren Trees, their faded greenness, if that Medicine be applied to their Roots. On the contrary, common salt before preparation, is hurtful to Vegetables, and killeth them by its Corosion, but after preparation it exceedeth dung in fatening them: Nevertheless, there are some Vegetables, which are able to bear the Corosive power of salt, *viz.* those which grow spontaneously upon the Sea shore, as the Herb *Kaly*, of which the Ancients prepared their *Sal Alkali*; for being burnt it leaveth a very sharp salt.

Also all those Fruits which are of a sowre, or bitter Taste, or have sowre, or bitter Rinds, do equally bear the Corrosion of salt, as Olives, Limons, Oranges, Lentisk, and the Palm, which also rejoiceth in common salt; as on the contrary, the Vine, Grain, and Fruit-Trees are delighted with the sweeter Sun; concerning which, more hereafter.

I remember to have read, that in the Island *Sardinia*, near the City *Catar*, so great a quantity of salt hath been digged up, that it was given to the Inhabitants for their necessary uses, for nothing, and the rest was sold to Foreign Sailors and Merchants to be Exported. And the Countreymen so abounding with salt, gave it so largely to their Cattel, that they wonderfully abounded in Milk, whence they made most excellent Cheese, which was sold all *Europe* over, but whether it be that which we call *Parmasan*, I know not. But it appears, that so great a plenty of Milk and Cheese proceeded from salt only, which is also very agreeable to the Truth. The same Author (whose Name is *Bernbardus Comesius*) also taketh notice, that in the *West-Indies* there is a City standing in a sandy and barren place, abounding with a great multitude of Fishes, which are there taken. And the Inhabitants cast the Heads of the Fishes into a pit, or hole in the Earth, sprinkling them well with salt, and after a certain time taking them out, they plant or sow in every Head, a Corn of some Grain, and cast the same into the sandy Earth, and those Grains growing, do again bring forth an hundred fold. That this might be so done, is not dissonant to the truth, seeing that the Heads of the Fishes preserve the salt in the Earth, that it cannot be washed away with the Rain, nor the Grain be deprived of its Alimentary Juice. But such ways of sowing Grain, are tedious and laborious. I have a far other preparation of salt,

which without much cost and labour, rendereth a great quantity of it fit to make sandy ground fruitful, and yet is not washed away by the Rain, salt is to be rendered sulphureous, that it may generally and universally nourish.

N. B. Here some may say, if a sulphurous salt be the effecter of Fertility, how is it that the *Mare Mortuum*, or dead Sea of *Sodom*, abounding with sulphur and salt, doth neither bring forth Fish, nor contribute any thing to fruitfulness? I Answer, because the said Sea is full of bitter and Vitriolate Minerals, which by their Venom are hurtful to all Fish, and Vegetables, and also Fishes themselves cannot live in Waters which are too salt, which is to be observed. For every thing that is too much, is turned into a Vice. But what Fertility salt imparteth to natural things, may be learned by Fish, many thousands of small Fishes at once, proceeding from the Spawn of one Fish, which is not granted to Birds and Animals. It was not in vain that God would have King *Pharaoh* Dream first of seven fat Kine, and afterwards of other seven lean ones, descending from the Earth into the Sea, thereby signifying fruitfulness to draw its Original from the Sea. *Joseph* being illuminated by God, both by Divine and Natural light, understood this, and interpreted the Dream: To wit, that it was in the power of salt. Salt is insignized with the Title of the Fountain of Philosophers. *Hesiod*, *Homer*, *Plato*, *Pythagoras*, and other Philosophers, deliver that of all things, salt is most affine or near to God. I assert, that by the help of salt, many become the chosen Sons of God. If the Earth should want salt, there would not thence proceed any fruits affording necessary Aliment for Men, whence Mankind would perish, not being able to draw its Nourishment and Multiplication from the

Air, but is constrained to take it from the Earth. Salt becometh Milk, Honey, Sugar, Wine, Bread, Flesh, and passeth into all those things which we want. Salt is all in all things, the beginning and the end of all things which God hath created.

But some man may here ask; whether therefore do all things arise from salt? Whether it be necessary that salt in the seeds of Herbs, should be changed into Herbs, in the seeds of Animals, into Animals, and in the seed of Metals, into Metals? Whether such degrees may not be sooner passed by the quicker progress of Art, correcting the more slow advance of nature? I answer; yea, it may be done, it is possible for Art to bring salt to its highest perfection, by a far more compendious way, than nature can. But by what way that may be done, is not proper to shew in this place. This I would have you to know, that wonderful Generations do arise from the Sun or Fire, united with salt, which otherwise would not appear. For Example, in the Months of *June*, *July*, and *August*, fill a wooden vessel with common water, and expose it to the Rays of the Sun, that it may night and day receive the Astral Influences, and be dried up, being dried up fill it again with more water, and so keep the Vessel always full, in which at length, from the salt contained in the water, there will be brought forth Vermin of all sorts without any seed; such as is accustomed to be brought forth in other putrid Waters, as Frogs, Toads, and Serpents.

NB. That the Vessel must be made of Wood, not of Metal, least the water should suck in a Vitriolate Juice which is adverse to the life of Animals: Also beware that nothing of Iron or Copper fall into the Vessel, and corrupt the Operation. Or fill the same Vessel with sand, and moisten it with water, then

subject it to the Sun beams, and when it is dry, moisten it again, repeating the Humectations, and by this Operation you shall see various and unknown Herbs to come forth and be produced, without any seed, as is manifest from other places of my Writings.

Gold the most constant of all Metallick Bodies, and as it were invincible, feareth not the violent assaults of any other Element, and subsisteth in the fire it self with so great constancy, as not to lose any thing of its weight, although for many years it should be kept in a continual torture of Fire. Nevertheless, salt draweth from it its Anima, and taketh away that fair red colour, and that constancy, whereby it was wont to resist the fire, so that it obtaineth the colour of Lead, and the brittleness and fugacity of Antimony. A thing exceeding the credit and belief of the unskilful, although experience it self witnesseth it to be true. Hence it appeareth, that there is a greater power in Salt than in all the Elements and Elementary things, and therefore we deem it to be justly called the Center of the Elements concentrated. Gold eludeth the most potent and subtil powers of the fire, which nothing can resist, and yet is overcome by Salt, which by a stupendious Miracle of Art, attracteth its most Noble Part, *viz.* its Anima being separated from its more gross and earthy parts. How noble a thing the Anima of Gold is, any Man may easily imagine, and without doubt may see, that it hath the chief place in Medicine. This is like to what *Sendivogius* hath written concerning his *Chalybs* spoiling Gold of its Anima, but although such an extraction hath divers times succeeded to me according to my wish, that the Anima being extracted, the body of the Gold hath been left brittle, fugacious, and black; yet I confess, that the same Operation hath not always answered my desire; as if God would not permit such

a secret to be commonly known. Therefore I am well content with lesser things, and have shewed these things only to the end that I might manifest the Powers of Salt, and teach them to others: Nevertheless, I would not have any Man perswade himself, that this Royal Medicine may be extorted from Gold, by the help of common Culinary salt; for to this matter another Salt is required, to be prepared by Fire and Art. But of this Artificial Concentration of Gold, the fourth part of *the Prosperity of* Germany, which God willing, shall shortly be published, will shew more at large. More indeed might be said concerning Salt, which we leave for another time and place, seeing that those things which have hitherto been spoken, seem to me to be sufficient.

Therefore I conclude, and affirm Salt to be a help to all things, and on the contrary, to want the help of nothing.

Here some Man may ask me and say, Of what Salt dost thou speak, for there are many sorts of Salt? I speak of the Universal Salt, known to all Men, which is boiled up from Sea water, or Salt Springs, or digged out of Pits in Mountains or other places, and put to common and familiar uses. This known Salt, I here call (and not injuriously) the Universal Treasure, and general Riches: For it administreth Nourishment to the whole World, that not only the Beasts of the Earth, Fishes in the Waters, and Birds in the Air, but also all Metals in the Bowels of the Earth may subsist for the use of Man, to say nothing of the great and Universal Medicine, which may be obtained by its benefit. Of right therefore it meriteth the Title of the Universal Treasure of the World, seeing that nothing can be found, which doth not owe its Original to Salt. But that one salt is purer,

better, and more precious than another, I do not deny, that the Original and beginning of all salts, is one and the same, and that their difference happeneth only from Accidents. For so long as salt is pure, and mixed with nothing, as it is made by the Sun in the water, it is one and the same, and possesseth one and the same Taste, and the same Virtues: But as soon as it is mixed with other things, or changed by the fire, its first nature being laid aside, it becometh either better or worse. This is taught by Wood and Stones, reduced by the fire into Coals or Ashes, in which part of the salt flieth away with the smoak, the rest remaineth in the Ashes, shewing a far other nature from that which it had before it was destroyed by the violence of fire. Indeed, by the Operation of the fire, all salts obtain a fiery and sulphureous nature, and therefore necessarily assume another Property, which being well known needs no dispute. The most known, most simple and void of all mixture is that salt which is elicited from Sea-water, or salt Fountains, or Mountainous Caverns. Vitriol and Alum, are indeed also salts, but infected with an Earthy and Mineral Property, and therefore unworthy of the name of simple salts.

Salt-peter is also numbred among salt, but it cannot be said to be a simple salt, such as the Sun operateth. For it is either digged out of the Earth, being generated of the Urine of Men and Beasts, and elicited by water, and by decoction shooteth into Christals, and separateth from other Salts; or it is taken from the Mortar of old walls made with Lime, or it is taken out of Mountains and Limy or Chalky Hills, by the help of water; or it is made by Art of common Salt, Wood, or Lime-stones. But which way soever it cometh, it is of one and the same nature,

and burneth with a flame, as my Treatise of *the Prosperity of* Germany, describeth more at large. Salts extracted from the Ashes of burnt wood, do again possess another nature and other Properties, and are called by the Name of Alkalies. Also there is another Salt prepared from Urine, common salt, Soot, and Bulls blood, known by the Name of Sal Armoniack, and is used instead of another Sal Armoniack, which was digged up in certain Mountains, and brought to us, which now ceaseth to come.

These are the most noted salts, and serve for very many uses, as Sea salt, Fountain salt, Mountain salt, which is also called Sal Gem, which are used in the Kitchin for seasoning of food, for the salting of Flesh and Fish to preserve them some time from Corruption. The use of Vitriol is chiefly in Dye-houses, for dying Silks and Cloth black, as also in Apothecaries shops, where it serveth for the preparing of Medicines: Concerning these things, see more in the first part of my Furnaces.

Alum is profitable for Dyers, Physicians, and other Artificers. Of Salt-petre is made that devilish thing call'd Gun-powder. Besides this it is profitable for the making of many excellent Medicines, and for the Chymical Emendation of Metals, and the inventing and utility of many Mechanical Arts, as appears by the second part of my Chymical Furnaces, and the second part of my *Pharmacopœia Spagyrica*, also *Miraculum Mundi*, its Defence, and Continuation, as also the four parts of *the Prosperity of* Germany.

Of fixed salts, those which Wood Ashes afford, have their use in Medicine and Alchymy, but they are more frequently used in Dying of Cloth, and making Soap. Sal Armoniack is used in Medicine, Alchymy, and other Arts, but all those salts are so

well known, that we shall supersede any farther Declaration of them. Those therefore which we have here mentioned, are Salts, which hitherto, by a long Progress of time, and continual experience, have made manifest their own Virtues and Powers. Among those, the Culinary or Kitchin-salt is most eminent in nobleness, excellency and necessity, inasmuch as it is that from which all the rest do arise, as also by the help of Art may be made, as my Writings every where teach; and is the *Basis* of all other Salts, whether known or unknown; which thing is most true, and will alwaies remain to be true: For by a very easie business, by fire and the addition of any metallick sulphur, it is turned into Alum or Vitriol; by the help of Sulphur, Fire and Air into a burning Salt-petre; and by the help of a certain peculiar strong fire, it passeth into an alkalisate salt, and being deprived of its sharpness, becometh very profitable for the dunging and fattening of Fields, and sandy and barren Land.

Moreover, the common Kitchin-salt suffereth it self to be purged and cleansed by its own spirit, and by that purgation and cleansing acquireth a clearer and whiter colour, pleasanter taste, and more excellent powers and virtues for the seasoning of Food, and salting of Flesh and Fish, for it becomes sweet, clear, and pellucid like Crystal, and shooteth into square Crystals like Dice, reduced into Figures so perfect, that they cannot be more perfectly formed by any Instrument.

Hence no man will deny, but that such a cleansed salt is more conducible to health than that which is gross and impure.

I admire at our supine negligence, who are so little sollicitous about our own health. We daily see with

our eyes, that no man can want the use of salt, that it is subservient to the health of man, and also necessary for Cattel. And if when gross, as it comes from the pans, and as yet loaded with many fæces, it doth much good; without doubt it would do much more, if it were cleansed and prepared by an artificial preparation. It is the interest of great men (if not of others) who have the government of many Subjects, to preserve a firm health of Body, and to cause such salt to be prepared for the use of their Tables. The Cost required for the doing this is small, by which the salt is made so sweet, that by its pleasantness it will invite every one to covet it. It doth not provoke thirst after the manner of common salt, inasmuch as it wanteth those earthy fæces which yet adhere to common salt, but quencheth it, allayeth hunger corroborateth the heart, as also the stomach, brain, and all the members of the body, admitteth no putrefaction in the body, preserveth it against all Diseases, and excelleth with wonderful Virtues, to which that gross salt is in no wise to be compared. Truly it is a great Treasure and high Gift of God, by which Mankind is sustained, nourished, corroborated, and encreased, for which great thanks are to be given to God.

Besides the commemorated Purgation of salt, inversion and commutation of common Salt into Alum, Vitriol, Salt-petre, Alkalies, and the like salts mentioned in my Writings, there is yet a more secret purgation and emendation of the same common salt, exalting it into a more noble and far more excellent state, concerning which I do not remember that I have read any thing in any Author, except in *Paracelsus*, who maketh mention of it in few words, in the Chapter of the Virtues of common salt, saying, The Virtues of Salt consist in its preparation; crude

salt only doth this, that it preserveth the goodness of Flesh and Fish. But if it shall become a *Sal Enixum*, it keepeth all things in their state, safe and sound, for an incredible space of time, it turneth Wood into Stone, as also dust and sand; the Leaves of Trees remain green in it; whatsoever is besprinkled with this salt, refuseth all mutation. It preserveth like a Balsam, and effecteth more, because in process of time it coagulateth all things.

These are the words of that incomparable Physician and Philosopher, concerning his *Sal Enixum*, but what this name signifies I know not, but I call it *Sal Mirabile*. He attributeth this to it, that it is able to preserve all things safe and sound for an incredible space of time: Nor doth he erre from the Truth, for he that can prepare such a salt, may not only perform that, but also much more.

The manner of preparing it is well known to me, because I have often made it, and found in it things incredible: Whether my preparation agrees with the preparation of *Paracelsus* or not, nevertheless all things which *Paracelsus* ascribeth to his *Sal Enixum*, and far more, I do in no wise doubt to attribute to my *Sal Mirabile*; neither is it any matter to me or others, whether I use or not use the same preparation that *Paracelsus* did, provided my salt performeth the same things which I affirm it can perform. Also I would not give the same name to my salt, which *Paracelsus* did to his, lest Calumniators and Cavillers should, out of envy and hatred, take occasion thence of calumniating me, and saying, That my Salt is not the *Sal Enixum* of *Paracelsus*, which hath already happened to me, when I gave the name *Alkahest* to my Universal *Menstruum*: For the proud Sophisters and ignorant haters of me, in their debauched Cups,

have taken occasion to cry out against me with loud vociferations, saying, *The Alkahest of* Glauber *is not the Liquor Alkahest of* Paracelsus *and* Helmont; when nevertheless mine exceedeth the Liquor of *Paracelsus* and *Helmont* by many degrees. For mine is at hand, and to be seen, by help of which I prepare my *Aurum Potabile*, tinging Mercury into pure Gold. That *Liquor* of *Paracelsus* and *Helmont* is plainly invisible, and can be prepared or procured by none: *A small Bird in the hand, is better than many thousands of great birds that flie in the Air, & can neither be seen nor taken*. And this is the reason why I would not call my Salt by the same name, because I would not afford my haters, the wonderful Brethren of Ignorance, new matter of flouting, scoffing, and defaming me; although I well know, that my *Sal Mirabile* doth not in the least come behind the *Sal Enixum* of *Paracelsus* in Virtue, and perhaps also much to exceed it; which in the following Narration I have determined to make manifest.

As *Paracelsus* delivereth, that his *Sal Enixum* defendeth all things which are put into it from Corruption, for an incredible space of time, and at length, by an admirable Metamorphosis, transmuteth them into stone; my *Sal Mirabile* doth not only perform that, but effecteth ten times more.

But before I enter upon the description of the Virtues lying hid in my *Sal Mirabile*, I think it necessary to indicate, That Salts of this sort do every where occur in the Earth, and being dissolved by Water, are carried to the superficies, and such Fountains are enumerated by *Gerogius Agricola*, shewing in what places they may be found, and that all things put into them are in a short time converted into a stony matter; which other Writers also testifie,

and especially *Celsus* in his Book *De rebus metallicis*. Nor is there any reason why any man should doubt it, seeing that Fountains of this sort offer themselves in our *Germany*, although few judge them to be of any moment. There is such a one in a certain place of *Helvetia*, which in a certain space of time converteth all Wood cast into it wholly into Stone. And the Inhabitants of that place do very often make trial of the thing by Experiments, by cutting some Wood, and reducing it to the figure of a Whetstone, and putting it into the water of the said Fountain, in which, being converted into a stone, they afterwards use for the whetting of Sythes, and other the like Instruments. I my self have seen whetstones of this sort, and had them in my hands, from the figure of which it sufficiently appeareth, that they were first wood, and have been converted into stone by so wonderful a Metamorphosis. The matter is out of all doubt, and there are many Fountains obvious in other places, of the same Nature. I have not seen that in *Helvetia*, but I have seen the Infant of *Basil* with Dr. *Exius*, who is yet living. To this Infant, in a very large Glass, standing upon a low settle, the Signior *Exius* had poured a certain peculiar Liquor, which had preserved it plainly uncorrupted and unhurt, to that time that it was shewed to me. And they told me, that the Infant was by the Liquor changed into stone; but I, seeing I did not touch or handle it, cannot affirm that for certain; but I saw it sitting with a full body, as if it had been but new born, since which time it is now above Twenty years, and then it had been Ten or Fifteen years in that Water, in which also it yet remains, as I have lately heard. But no man knoweth what water that was which the Signior *Exius* had put to that Infant, whether he took it from a Fountain turning wood into stone, or

whether he made it by Art. There is a Fountain of the like nature and property in *Austria* at *Neapolis Viennensis*, a fenced City about eight miles distant from *Vienna*; I being a young man, long time since travelling towards *Vienna*, fell into a burning Feaver, known by the name of *The Hungarian Disease*, which seldom any stranger escapes, and having somewhat recovered my former health, came to the said *Neapolis*, and suffering a Relapse, was constrained to stay there. And the Disease had so debilitated the Appetite of my stomach, that it neither desir'd nor digested any Food. The Inhabitants advised me to go to a Well of almost an hours Journey from the City, situated near a certain Vineyard, and to drink of the Water to recover my lost Appetite. Following their Counsel, I took a great piece of Bread with me to the Well, nevertheless I gave but little credit to their words, who told me, that I would eat all that piece. Coming to the Well, I eat the crumb of the Bread sopped in the water, and it relished to me very pleasantly, who before at home loathed the greatest Dainties. I took up the same water with my hollow crust of Bread, and drank it, which so excited my Appetite to eat, that at length I also eat up my Cup, which I had made of my Bread; returning home much better and stronger, I declared to the Inhabitants the event, succeeding according to my wish, who affirmed to me, that if I would continue the use of that water, the faculties of my stomach would be throughly confirmed. I asked them what kind of water that was? They answered that it was water of Salt-petre, which I believed, being then unskilful in such things, but afterwards I found the contrary: For it could not be the water of Salt-petre, seeing that in no wise conduceth to the stomach, but rather occasioneth nauseousness and loathing. It

might be, that the water of the said Fountain being evaporated to a Cuticle, might shoot into Crystals like to Salt-petre, but notwithstanding was not true Salt-petre, as wanting all burning, and not taking flame, which they might easily have found, if putting a little of that salt upon a burning Coal, they had tried it after the accustomed manner of trying Salt-petre: For now it is certainly evident to me, that that Fountain contained that Salt which *Paracelsus* called *Sal Enixum*, and I *Sal Mirabile*; and also that it is the nature of that to shoot into long Crystals, and yet not to conceive flame. That *Well* is enclosed with wood, in which many water-Mice have their Habitation, which presently will seize and swallow any crumbs of Bread cast into the water. I asked why a *Well* of so great moment was enclosed and fenced with wood, and not with stone? They answered, That could not be done without damage, for the wood being taken away, which had now passed into a stony nature, it would come to pass, that the sand falling into the well, would choak it up. The wood which did not touch the water was now rotten, as I then very accurately observed, being a young man of 21 years of age.

Staying in the same City the following winter, I found, that the Moors or Marshes about the same, which rendered it so strong, were never frozen into Ice by the cold of the winter; which is an Argument that a certain peculiar salt is latent in that water; which is the reason that the Planks or Piles fixed into the Marshy ground, upon which many, yea, the greatest part of the Houses of that City, do stand, or are set, in a long progress of time, are changed into meer stones, and afford a firm Foundation to the Houses built upon them.

From all those indications I have hitherto conjectured, that all the Springs about that City abound with that sort of salt which *Paracelsus* calleth *Enixum*, seeing that in the said Marshes I have seen the Grass green all winter, which is a certain indication of this kind of salt there existing. The watery Animals which are in the Fountain and Marshes near to the City, confirm the conjecture, among which the number of the water-Mice is not small, which cannot live in all waters; and the shell-Fish, or Tortoises, which are every where in an incredible quantity, in the water flowing about the City, and watering the Marshes and Gardens, although wont to be esteemed by great men among Delicacies, are here of no account at all; and for that reason both the Citizens and Countrymen put two or three of those shell-fishes into the vessel in which they save the washings of their Dishes, to give to their swine, saying, that this sort of Animals abiding in their wash, conduceth much to the fattening them. And from these things it appeareth, that water-Mice and Shell-Fish of this sort, do delight in sweet waters, tempered with a certain salt. Any man that hath a mind to take the said Shell-Fish, or Tortoise, goeth into the Meadows or Pastures in a morning, which are watered with this kind of water, where they wander about in the wet Grass, seeking their Food; and also in the evening after sun set, when they return again to feed. If they perceive any body in their way, they presently betake themselves to the water, and in their entrance into the water, they retract their four feet, which with their head and tail (like to the heads and tails of Serpents) they hide and secure in their shell, which is so hard, that it can scarcely be broken with a strong and heavy Hammer. The Inhabitants, when they will boil them, prick

them with some sharp Instrument, at the feeling of which, they again put their head and tail out of the shell, which they presently cut off with a knife. The body being boiled in water, the shell openeth of its own accord, out of which the Fish being taken, is purged, and prepared with Butter, Wine, and Spice, and is not much differing from Veal, nor of an ingrateful taste, and therefore reckoned amongst delicate Foods, by those who are given to feed daintily. Truly, I am perswaded, that Animals of this sort are not to be used as Food, but are rather profitable to the health of Mankind, because they abide in pure waters.

These few things my Experience hath administred to me concerning these Waters, by which Wood is changed into Stone, yea, not Wood only, but also the skin and bones of Animals. I have also seen half a Loaf of Bread turned into a Stone; whence any man may conjecture, how great a fixing power is latent in the said salt, concerning which there is yet more to be said.

This Transmutation of Wood into Stone will put all the Brethren of Ignorance to the blush, who with their ridiculous Mockeries laugh at and deny the wonders of Nature of this kind, that by the operation of Art emulating Nature, a Body should be spoiled of its fugacity, and be transmuted into a constant and incombustible body. All Wood being burnt by the fire, is consumed, leaving nothing behind it except a few salt ashes, which nevertheless being transmuted into a stone by a fixing water of this kind, retaineth its pristine body, and cannot be consumed by any fire. This is an infallible Argument, most clearly refelling those Ass-like Deriders of Art. Can these Belweathers be more clearly refuted by any other

Argument or Testimony? I speak these things, to the end that they may be brought to a more easie belief, and not to be amazed with so great admiration, when they shall in the following Treatise hear me affirm, That any subtile Spirit of Wine, by the help of this kind of Water, may be changed into a fixed Salt, constant in the Fire.

Seeing therefore it may come to pass, that by such a Transmutation any fugacious Spirit of Wine may pass into a fixed and constant Salt, Who will deny, but that the same constancy may be afforded to fugacious Metals, by a water of this kind? But by what means such an operation, which seems impossible to every man, may be effected, may be worth the while to indicate in few words, seeing that it happened to me casually, not seeking it, and which I my self at that time should not have believed, although any one had seriously affirmed it to me.

The *Sal Enixum* of *Paracelsus*, or my fixed Salt, which dissolveth all things, is endowed with that virtue and efficacy, that it dissolveth all things by Fire; at a certain time I had dissolved Gold with it by the dry way, and would make trial whether Spirit of Wine would take a Tincture from it or not: The dissolution being made, I would have poured upon it a burning Spirit of Wine, but by chance I poured upon it in the Glass Spirit of Juniper; afterwards perceiving my errour, I set the Glass aside, and half a year after, I found the Spirit tinged with a bloody colour, which I filtred through a brown Paper, and put the clear Tincture into a Glass, to separate the Spirit from it by the Fire. But seeing that I obtained not a Spirit, but an insipid Phlegm by evaporation, I found that that Red Salt, in a long process of time, had rendered the Spirit fixed, and by a wonderful

change had coagulated it into a fixed Salt. The same Salt afforded me another Experiment, and indeed yet worthy of greater admiration: A certain Friend gave me a glass of Oil of Citrons, prepared from mouldy or decaying Oranges and Citrons, by destillation, which Oil smelt mustily, to take away which ill smell, I would have poured upon it Spirit of Salt, but by chance put to it my *Sal Enixum* dissolved, and destilled it by fire, which indeed rendered me a clear Oil, but in small quantity, and scarce the one half; Therefore continuing a stronger fire, when nothing more would destil, I let the fire out, the Glass being cold, and taken out of the sand, I found all the residue of the matter turned into a black Coal, and when I had taken it out of the Glass, I put it upon a burning Coal, to see whether or no any Oil yet remained; but the matter being consumed by the fire, left many Ashes, and discovered the fixing nature of my Salt. And searching more accurately into the operation, I found many wonderful things, which afterwards gave me occasion to call that Salt by the Name of *Sal Mirabile*. Let others search into the matter, by more exact Meditations, that they may be able to penetrate into it with a deeper sight. He that cannot see the virtues of this Salt, is destitute of Eagles eyes, beholding the Rays of the Sun with an unmoved aspect, and hath the eyes of an Owl, which can see somewhat in the dark, but is blind at Noon-day. Truly, it is a thing to be admired, that an Oil so combustible, in the space of a few hours, should be reduced to that state, that it should glow and burn in the fire like a Coal. Therefore let it not seem strange to any man, that any Wood abounding with much combustible Oil, should in a long progress of time, by the help of this Salt, be transmuted into a Stone. The knowledge of these things happened to me by

chance; But who doubteth, but that the studious of Art may, by a sedulous and accurate search, find out many more? These are enough to the wise.

Now followeth the Praxis, demonstrating the Theory, by what means this Salt is to be prepared, and to what uses it is to be adhibited, and what wonderful and incredible things may be performed by *its* help, as well in Alchymy as in Medicine.

I. *Of the Preparation of* Sal Mirabilis.

This my *Sal Mirabile* is prepared and separated from all vulgar Salts, by the help of Art, nevertheless more easily from one than from another: For it may be elicited not only from the Salt of the Kitchin, but also from other salts, as Salt-petre, Vitriol, and Alum: Alum and Vitriol abound with many sulphureous and mineral qualities, and therefore occasion much difficulty and labour in their separation; and Salt-petre possesseth a fugacious and burning nature. Therefore setting those Salts aside, we prepare our *Sal Mirabile* of that common salt which is used in Kitchins, separating from it, by the help of fire and Water, whatsoever is earthy and terrene; and the same being prepared, as much as in us lies, we use it to the Honour of God, and the profit of our Neighbor.

Of the external Figure, Colour, Taste, and Smell of Sal Mirabilis.

This *Sal Mirabilis* being rightly prepared, looketh like Water congealed or frozen into Ice; it appeareth like the Crystals of Salt-petre, which shoot into a long Figure; also it is clear and transparent, and being put to the Tongue, melts like Ice. It tasteth neither sharp,

nor very salt, but leaveth a little astringency upon the Tongue. Being put upon burning Coals, it doth not leap and crackle after the manner of common salt, neither conceiveth flame like Salt-petre, nor being red hot, sends forth any smell; which gifts or endowments no other salt possesseth.

II. *Of the External and Internal Use of my* Sal Mirabilis.

In the first place it is to be known, that my *Sal Mirabilis* containeth many great and hidden Virtues, inasmuch as it is not so sharp and acute as other salts, and therefore its internal as well as external use, is easily admitted in Medicine. Externally adhibited, it cleanseth all fresh wounds, and open Ulcers, and healeth them; neither doth it corrode or excite pain, as other salts are wont to do. Within the body it exerciseth admirable Virtues, especially being associated with such things whole Virtues it encreaseth, and which it conduced to those places to which it is necessary they should arrive: For Salt is the Conducter and Rector both of good and evil Powers or Virtues, and carrieth them along with it self, according as they shall be joined with it. As the nourishment of Vegetables and Minerals consisteth only in Salt, so also the nourishment of Animals dependeth upon the same. For if the Herbs, Bread, Flesh, and all other things which we eat, should be destitute of salt, they could in no wise sustain, nourish, and encrease the Bodies of Animals, for by such it would forthwith come to pass, that they should consume and die: Therefore Food also nourisheth, as it is well and in due manner seasoned with salt, for a thing that hath no relish, is unfit for nourishment, according to the common Proverb, *Quod sapit, nutrit*; *And that which hath no taste, doth*

also not nourish. Therefore the Omnipotent GOD hath given salt to all His Creatures, by which they are nourished and sustained; so that there would have been no need of salting of Foods with salt, appointed for the use of Man, had not Sin and the Curse debilitated and corrupted all things, seeing that they were endowed with their own Salt by Nature: Therefore for the succouring of Nature, those things which contain little salt, are to be salted with common and vulgar Salt, which is appointed by God for this end, that it might afford nourishment to the humane Body, corroborate and strengthen it, as we see that Bread, Flesh, and all Herbs or Sallets, may be indeed eaten without salt, but not to afford so much nourishment: For it is commonly known, that Flesh, Fish, and Sallets being salted, do far better satisfie and nourish, than if those Foods should be received into the stomach wholly destitute of Salt. For this reason men that undergo hard labours eat Flesh, Fish, Herbs, and other Foods, plentifully seasoned with salt, whereby their Bodies are preserved in their due strength; but those who are not exercised with Such labours, feed upon Foods not so salt, but of a more easie digestion. Salt therefore is the only nutriment not only of Vegetables and Animals, but also of Minerals; yea, it universally nourisheth and encreaseth whatsoever existed in the World.

Seeing therefore that without salt nothing can exist or live, and that the life of all things consisteth in salt alone, as is witnessed by daily experience; Wherefore do Fools think Salt to be a thing of so small moment? I answer, That this happens because very few know what Salt is, what Powers and Virtues it exerteth, and what is reconded in its inward Penetrals: As is said a little before, I compare salt to

a Carrier, because he carrieth or conveyeth all those things which are put to him, whether good or evil, thither to where they are to be conveyed, without any labour or trouble, but committing the care to him, who taketh all the burden.

In like manner, Salt being mixed with good things, which administer a good nourishment, assisteth the nutritive faculty, and is the conveyer, helper, and strengthener of the adjoined nutriment: Being mixed with venomous and hurtful things, it encreaseth and confirmeth the Venom with great detriment to the Body, insinuating it into the Passages and Members, into which, without salt, the Venom could not have penetrated; therefore with the good it is good, and with the evil it is evil, and being addicted to neither part, is subservient to both, according to the will of the Artist, making good the vulgar Proverb, *Salt and Wine quicken the wit*: That is, when mixed with good things, they be moderately used. So also the contrary is true, if it be said, that *Salt and Wine deprave the Wit*; which I could demonstrate by many Examples, which for brevity sake are here omitted. Nevertheless, that I may be the better understood, I will instance in two things: As I said but now, if Salt be mixed with good subjects, containing a good nourishment, such are Bread, Flesh, and Herbs, the same are rendered fitter for nourishment, if daily experience may be credited, which no man will deny. Why therefore should not the contrary be likely, that it should render an evil thing yet worse, and corrupt it more, if it be associated with it. As for example, Common *Argent-vive* is esteemed Poison, and indeed truly, and is rendered obnoxious to a greater or lesser poisonous quality, according as it shall undergo this or that Preparation. If one swallow half an ounce of it, it operateth nothing in the Body, and

passeth away without hurt; but being sublimed with salts, and exalted in its venomous quality, being exhibited in the weight but of two, three, or four grains, is sufficient to kill a man.

In the same manner Orpiment, as digged out of the Mountains, performeth nothing of good in an humane Body, exciting frequent and intolerable vomitings and stools, if given in too great quantity; nevertheless one, two, three, or four grains of the same may be taken without any danger, causing easie vomits and stools; but being exalted by sublimation with common salt, becometh so hurtful a Poison, that being drank, it forthwith killeth Men and Beasts. So also it is with white Arsenick, which being sublimed with Salt, obtaineth such a poisonous nature, as is commonly known, although the cause of that evil be known to few, as the said Examples do sufficiently declare. I will yet add one thing over and above, for the sake of the Ignorant: They who have been versed in the Labours of the Fire, know those things, and want not my teaching, although their number be very small, but of the Ignorant and Unskilful it is large enough. Arsenick and Cobolt are indeed most vehement Poisons, but nevertheless are not hurtful to the Body, if they be taken in their corporal form; but being exasperated by sublimation with Salts, and reduced into a more fugacious nature, arrive to that vehemence, that they are able to kill a man only by their odour. Those who have mixed Arsenick with Vitriol and Salt-petre, for the preparing of graduating Waters, as they call them, have experienced the Truth of this. Such Waters are so vehemently poisonous, that they smite the Heart with a trembling of any one that taketh in their odour by the Nose, and also extreamly debilitate the Brain. That vulgar Proverb, which saith, That *Salt*

corroborateth the Heart and quickeneth the Wit, is true, when wholesom and healthful things are associated with it; but if things unwholesom and poisonous be adjoined with it, it doth the quite contrary, suffocating the Heart, and weakening the Brain, both which I my self have found.

Long ago, when I was young, being occupied with Arsenical Waters of this kind, it often happened to me, that those strong saline Spirits had almost put out my Candle. Again, on the contrary, I have found, when I have mixed corroborating subjects with Salt, that it hath encreased their strengthening Virtues, and exalted them in a wonderful manner. Therefore it is not without reason that *Paracelsus* teacheth, That Gold exerciseth no power or virtue in the humane Body, but by the Spirit of Salts, which insinuate the virtues of Gold into the Members, and augmenteth them. Here some may say, Seeing that other Metals exert their powers in humane Bodies without Salt, Why should not Gold also do the same, if it hath any virtues? I answer, That this is the reason of the difference, because the other Metals being reduced into small Particles, by filing, do act in the humane Body, by reason of their own Vitriolate Salt, which they retain in melting, more easily admitting solution in the Stomach, and performing their Operations, by reason of that natural acidity, which Operations would be exasperated by the addition of Salt. But that the imperfect Metals effect nothing of good in the body of Man, is witnessed by Tin and Copper, in a Vessel of which, Wine standing all night, and then drank, causeth Vomitings and Cholical pains, as also Palpitations of the Heart; in exciting of which, Copper exceedeth Tin, which doth not so frequently excite Accidents of this kind, especially that which is not adulterated with Bismuth or Tinglass, but is pure

and unmixt. Lead being swallowed, drieth, and cooleth too vehemently: But the filings of Iron are used medicinally, not without great profit, because they kill and expel the Worms in Children; and its *Crocus* is also wont to be mixed with astringent Medicines with Fruit. Silver being filed and taken, is of no use in the humane Body, because it hath in it self no salt, with which Iron and Copper are endowed. Nevertheless, being prepared with Salt, it obtains an entrance into the Members of the Body, and expelleth all hurtful Humours, and strengtheneth the Brain. But being bitterer than Gall, it is so ingrateful to the Palate, that it is more difficult to be taken than Vitriol it self. Gold, the most eminent among all the Metals, in purity and nobility in its own nature, possesseth no Salt, and therefore hath no Operation at all in the Body, whether it be taken in filings, or reduced to a subtile powder; for the *acidum* of the Stomach is not of so great power, that it can enter and dissolve Gold as it dissolved Copper and Iron, but dischargeth it with the Excrements in the same form in which it was taken. Hence the Unskilful have been so bold, as to exclude Gold from a medicinal use, as a thing destitute of all Virtue, and altogether of no use; an errour truly not Philosophick, but foolish, proceeding from meer unskilfulness and ignorance, seeing that Experience doth altogether testifie the contrary. He that believeth no Virtues to be in Gold, may by an easie experiment find the contrary, if he shall dissolve it in Spirit of Salt well cleansed and rectified, and shall drink a little of this Solution mixed with Wine or Beer, or any warm Broth or Gruel, for he shall perceive a very swift and healthful Operation,calling out all Superfluous fæces, according as they shall offend, either by Vomit, Stool, or Sweat, or Urine,

without any weakening of the Body, but evidently confirming its strength, as I have shewed in my Book entituled, *The Consolation of Navigators*, in few words, by reason of the shortness of time, which did not allow me to treat of this matter more at large. Nevertheless I here assert, that a solution of Gold of this sort by Spirit of Salt, is able to perform very much in Medicine, although by reason of its ingrateful relish, it is not much to be esteemed: For seeing the spirit of Salt, with which the Gold is to be dissolved, ought to be very strong from this corrosive Liquor, without which the Gold cannot be dissolved; first, this incommodity ariseth, that its use is unpleasant, it blacketh the Lips and edgeth the Teeth; to which may be added, that a great quantity of Liquor is required for this solution, and the acidity by degrees bringeth loathing to the sick, and sometimes the sick cannot bear the sharpness. Moreover, if this solution be taken in Broth, it hindereth its operation, and wanteth the desired success, of which it is not destitute when drank in Wine or Beer. For this reason this Medicament, which in itself is very noble, and of great moment, is difficultly admitted into use. But because we have said that Gold without Salts is able to operate nothing at all, its whole solution consists in such a *menstruum* which is neither corrosive, nor of an unpleasant relish, nevertheless openeth the Gold, and rendereth it apt to become a very wholsom Medicine; which endowments I have found in no other thing but my *Sal Mirabile*, which being void of all corrosion and unpleasantness, is it self an excellent Medicament, and conciliateth a pleasant sweetness to all things which it dissolveth: For when it dissolveth Gold, it doth not stain the lips and hands with any colour, like other solutions, which are made by *Aqua*

Regia, or spirit of salt; neither also doth it astringe like other solutions, but is of pleasant use, and exerteth its gift by a noble Operation. I have tried many admirable things with this Salt, and at length obtained a solution, or rather an extraction of Gold, green as Grass, and is a very wholesom and most noble Medicament: For he who hath brought Gold to a greeness, hath performed much, in praise of which, many ancient Philosophers call it *The Blessed Viridity*. But what this greeness may effect in Medicine, belongs not to this place, seeing that I intend here to treat of nothing but Salt, and to prove it to be the Beginning and End of all things, and that it encreaseth and exalteth the powers and virtues of all things.

And seeing that this is agreeable to Truth it self, and cannot be disproved by any man, it must necessarily be granted, that a Salt brought to the highest degree of Purity, (as mine is) must be far better, and more noble than any gross and impure Salt. Also because it amplifieth and exalteth the virtues of all Vegetables, Animals, and Minerals, and that Gold exceedeth in nobleness all other Creatures which are found under the Sun, it is easie to conjecture, that if the purest and most noble part of Salt shall be associated with Gold, that also a most noble Medicine must thence arise: For Salt and Gold, being the Off-spring of the Sun, are (as it were) immortal and incorruptible, and therefore afford help to all mortal and corruptible things, and defend them from putrefaction and corruption.

Nevertheless, I would not have any man perswade himself, that in these words I go about to assert any Immortality, my purpose tendeth not thither, seeing that I am not ignorant that there is no Medicine

against Death. I would only signifie this, that from the association of Salt and Gold, there must necessarily proceed an excellent Medicament. If Salt carrieth and promoteth the Virtues of other things, wherefore also should it not promote and convey the Virtues of Gold? Truly there is found no Herb so abject, no Stone so vile, nor no Bone so contemptible, that doth not possess its own Virtues: Who then can deny that Gold, as the most Noble Creature of God (after the Sun and Salt, of which it is generated) should possess Gifts and Endowments, to be preferred to those of the more vile Creatures? That nothing of evil can proceed from two excellent subjects, to wit, Gold and Salt, every unskilful Rustick can understand; Wherefore then cannot those proud and idle Scoffers perceive it? I think it to be, because they would not be numbred among rude and ignorant Asses, if subscribing to my words, they should confess such a Medicine to be *in rerum natura*, and notwithstanding to be ignorant of its Preparation. But it were better for them not to envy those who have received such Gifts, nor to assault the Innocent with so many filthy Calumnies and Slanders, but to leave those things to them which exceed their own Capacities.

I now make mention of my Green-Lyon, whose wonderful Virtues are to be declared and manifested to the whole World; although I well know, that this Green-Lyon will not find fewer enemies than my white or red *Aurum Potabile* hath done: For the Devil can in no wise suffer, that any thing which is profitable to Mankind should be made manifest, therefore he useth all his power and arts to hinder the knowledge of the Truth, by casting stumbling-blocks in its way. What various Arts have been excogitated, to bring my *Aurum Potabile* into

Contempt, and indeed by such a sort of men, who might easily think that I should not grant one drop of it to such haters of the Truth, although they should petition me for it.

And seeing those Pot-Companions could not ask it of me, they have endeavoured to extort it from me, under pretence of the sick, not that they would serve the sick, but only get an occasion of contemning it, and of bringing it into an Odium with the Sick, lest by it they should recover their former Health. Have they not taken counsel together in their Meetings, one offering this, another thing, so that by every way possible they might oppugn my *Aurum Potabile*? But, this Hatred and Envy, carried on against me with great study, I leave to the Divine Vengeance; and although many watery and obscure Clouds may endeavour to hide the Sun, and to overspread his warm and vivisick Beams with darkness, nevertheless they shall effect nothing; for at length being dispersed into vapours, and vanishing in Clouds, they will give place to the Solar Rays. There is nothing able to extinguish the Truth, which may indeed be prest, but never overcome, and is therefore like the Light, never wholly extinguished. The Air is never filled with so many dark Clouds, but at length they being dissipated, the Sun again appears to sight. By a like reason also the Truth at length freeth it self from the snares of lyes, and cometh forth into the Light: Therefore I may without fear propose the Truth, although there be many that can but ill bear my liberty of speech; for GOD is to be obeyed rather than Men and the benefits due to Good men are not to be omitted for the sake of those which are Evil.

Therefore (in the Name of God) I will go on in declaring the Virtues of my *Sal Mirabile*; because I

have said in the precedent discourse, that Salt is the Rector or Disposer of all things, carrying their virtues conjoined with it self, to their due place; therefore it is not fit that evil and venomous things should be adjoined to it, but such as are good only, if any thing of good be expected from it.

But there is no Creature under the Sun more noble, excellent, and pure than Gold, nor which more resisteth the destruction of all the Elements, which without a true solution, as we have said, cannot render the Body of Man partaker of its Virtues, and all corroding solutions are found to be unfit to dissolve it; therefore such a solution is required, as may be performed by the help of a *Salt* which is not corrosive; therefore taking such a one in hand, we will see what good is to be expected from it.

Of the Use of my Sal Mirabilis*, as well in the Solution of Metals, as in the Preparation of Medicines.*

First, it is to be noted, That not only Metals, but also all Stones, and Bones themselves, refusing the solution of all corrosive Salts, may be radically dissolved by my *Sal Mirabile*, and most things so dissolved, whether they be Metallick, Vegetable, or Mineral, put on a green colour, of some of which the greeness remaineth, but of others, in process of time, is changed into a yellow or red colour.

Concerning this wonderful mutation and solution, I could write a great Volume, if I had not designed this Labour for another place, intending here only to describe the solution of Gold, because another better cannot be found. I have found the solution of the rest of the Metals which are adhibited, to be unfit either

for the preservation or recovery of Health, as I have admonished a little before; but I have found Salt and Gold to be most noble subjects, of which an excellent Medicine must necessarily be prepared: For Salt exalteth the Powers and Virtues of all things to a high degree of perfection, and insinuateth them into the humane body: This seems to me not unlike the volatile and fugacious Spirit of Vegetables, as of Wine and Beer, *&c.* which coming into the Body of Man, addeth strength to the Animal Spirit, that it moveth it self more readily, and with greater alacrity. Indeed every other Meat and Drink, whether it be Bread or Water, communicateth some strength to the Body, but not so powerfully and efficaciously as any generous Wine, whose Spirit is very pure, efficacious, and subtile; so that its too plentiful use awakeneth all things that lie hid in a Man, and brings them to light. In the same manner Salt encreaseth and confirmeth all things, & being united with them, maketh manifest all their hiden Virtues, which without Salt would remain in darkness. Who could have manifested to us that great Poison which lies hid in Arsenick, if Salts had not revealed it? If any melancholly Person (who otherwise in his own nature is prone to stilness, like one dead) shall drink any spirituous Wine, or strong Drink, his Spirits, that were before dull, and as it were buried in a Dream, will presently be awakened, and his Tongue set at liberty. The same doth Salt perform, which addeth an encrease to the powers of all things, especially of the Metals, which it rendereth manifest and known. And indeed without Salt Poisons could not have been known, as I have said a little above, concerning Arsenick and *Argent-vive*: If Salt worketh those things in evil subjects, by dilating and encreasing their malignity, Why should it not effect the same in good

subjects, by augmenting their goodness? Therefore, because among Animal, Vegetable, and Mineral subjects, there are none more noble and eminent than Gold and Salt, which have their original from the Sun, it would be ill done to pass them by, and to seek viler subjects, for the making of an excellent Medicine, seeing that if we take Wine, Salt, and Gold, there are no other things which afford us so excellent Virtues. Therefore acquiescing in these, we will endeavour of them to make a most noble Medicament.

The PROCESS.

Take three or four parts of *Sal Mirabile*, and one part of Gold (rightly fitted or prepared for this Operation) mix them, and put the mixture into a strong Glass Retort, well luted, which place in an open fire, encreasing the fire by degrees, until the Glass be red hot, urge the fire, and continue it stronger, for an hour, then cease, and let all cool, take out the Retort, and free it from the Lute, that it may not be mixed with the matter contained in the Glass, but that may remain pure, which is to be accurately separated from the Glass, and together with what is sublimed into the neck of the Retort, to be put into a clean glass; which matter will look of a greenish colour: To this matter pour some Rain-water, that it may be dissolved in an easie heat, and the Salt, with part of the Gold, may be mixed with the Water. Filter this grass-green Solution through Paper, and draw off some part of the water by destillation, that the green Liquor may remain, not corroding nor tasting sharp, nor yet too urinous, but fit to be drank in all Vehicles. The Gold which the *Sal Enixum* hath not dissolved, you will find after the solution, which you may again use for the like Work; but the green

Liquor you may presently use, as well in Medicine as in Alchymy, which will afford you many profitable things. He that will draw off all the Phlegm to a green Salt, and then extract that salt with an alkalized Spirit of Wine, will obtain a Medicine yet more efficacious: For the Spirit of Wine will not be tinged with a green, but a red colour, and will be very sweet, rendering the Golden Virtues of the Salt more efficacious, and more commodiously and readily insinuateth them into the Members of the Humane Body.

NB. This is to be noted, That the *Sal Enixum* doth not imbibe the whole mass of Gold in dissolving, but only its purer part. Now, if you repeat this Operation upon the same pure mass, as yet once more, you will extract the greatest purity, and without all doubt obtain a most noble Medicament, which no man can refute, although he be a capital Enemy to the Truth. This is the Operation, no less compendious than true, of preparing a great Medicine of Gold, Salt, and Wine, meriting the name of an *Aurum Potabile*, whose great Powers and Virtues are now to be manifested to the necessitous Sick.

Of the Powers and Virtues of my Green-Lyon*,* Vitriol of Sol*, or Wonderful* Golden Salt.

This green golden Liquor may be safely and pleasantly used by all, whether young or old, sick or in health, without any difference of Persons, because it containeth nothing which is evil or prejudicial: For a cleansed Salt and Gold, never inferr any ill, but are alwaies profitable, exercising their wholesom Operations, as well in Vegetables, as Animals and Minerals, as in the following Treatise shall be clearly demonstrated.

First, This green liquor, only by its external aspect, cheereth the Heart, Brain, and all the vital Spirits, seeing that of all colours there is none superiour to the Green in pleasantness, of which all men are witness, who have overcome the intense cold of a sharp Winter, behold the renewing greenness of the Trees half dead, and Herbs extinct, in the Spring time, with great delight and pleasure, and feel all the Blood in their Body to be renewed and revived.

Secondly, This Golden Liquor being drank, strengtheneth and confirmeth the whole *humidum radicale*, Stomach, Brain, and all the inward parts of the body, beyond all other Medicines which I have hitherto known. Also it expelleth Melancholly, and all anxieties of Mind, taketh away Palpitations of the Heart, openeth Obstructions of the internal Vessels; it healeth the hurts of the inward parts, as Liver, Lungs, *&c.* and cureth all inward Exulcerations; it cureth Gravel and Stone, whether in the Reins or Bladder; it keepeth the Body soluble; expelleth Wind, with the pains of the Cholick; preserveth the Blood from Corruption; cureth the Leprosie, Scabs, and Fevers of all sorts; in process of time it taketh away the Gout; to the insulting Apoplexy and Epilepsie it affordeth present Cure; it cleanseth the Blood infected by the Scurvy, Plague, and other contagious Diseases; it preserveth and freeth from all internal Ulcers; defendeth the Lungs, Liver, and other parts, and removeth Exulcerations already arisen, and takes them away radically. It so tingeth all the inward parts of a Man with its Balsamick Virtue, that not being easily obnoxious to Diseases, they enjoy a sound and long Life. Outwardly used, it healeth all fresh wounds, no less than old and open Ulcers, without any Ointments or Plasters; for in curing Ulcers of this sort, there is nothing in Animals,

Vegetables, or Minerals, which answereth to this in Virtue; as also inwardly it cureth Ruptures.

This is the nature and property of Gold, that it most potently taketh away all filths, and also astringeth; which two things are necessarily required in the Cure of all Ulcers. This Salt, by its own help, commodiously doth the same, and also wonderfully promotes the Virtues of the Gold: The said Liquor very quickly taketh away the Ulcers of the Mouth and Throat, with all their scorbutick Infection, which are wont to give way but very slowly to other Medicines: And this it doth, although the Tongue, Uvula, and all the Palate should be full of Pustules. In short, for the taking away all internal and external Ulcers, I think no Medicine preferrable to this Liquor; but all other defects of the Body which it cureth, for brevity's sake, I will pass over.

Moreover, this green and golden Liquor hath this nature and property, that beyond all other Medicaments, it conciliateth a wonderful fertility to all things, as its signature, the wit, the green colour, and my diverse infallible Experiments, do truly testifie. Hence the seeds of all Vegetables being macerated in the same Liquor, and set in meer naked Sand, they put forth golden Sprouts and Plants, having a smell much stronger and pleasanter, a fairer colour, and greater length than those which grow out of a fat Earth. Therefore this green Liquor holdeth the chief place in rendering Vegetables green and fruitful, and augmenting their growing faculty; so also among all the Medicines, I know it hath no equal in conciliating and preserving fertility in the humane body: For in all the Diseases of Mankind it bringeth great help and comfort, and effecteth more in assisting the fruitfulness both of Male and Female,

than can be believed, and is so great an exciter of Venus, that it bringeth great solace not only to Old men, who being baulked by their younger Wives, are forced to lie still, but also to such Women who are barren in their flourishing age, and therefore destitute of Heirs.

I write not dreaming, but am taught by Experience, having seen some men so strengthened by this Medicine, that they have seemed to themselves never to have been weak, the which also some Women have experienced. Nevertheless such Medicaments are not to be administred too frequently to this Sex, seeing that without this sort of help they are wont to be sometimes exagitated by a more salacious Itch than is convenient: Its use is more safe to Old men, inasmuch as it cannot do them the least damage. Nor ought those things which I here deliver, to seem a wonder to any, for they have their certain and undoubted causes of Operation.

Let those two Subjects, of which the Green-Lyon is composed, to wit, salt & gold be inspected; they are the best of things, & necessarily required to the generation of all things; for, what herb can be brought forth without seed and salt? not indeed the least: for if the earth or sand wanteth salt, the seed of the Herb can neither have nutriment nor production: Yea, if the seed it self be also sowed in a fat Earth, and yet be destitute of the Rays of the Sun, it can in no wise grow out of the Earth, but will be suffocated and perish; the which thing is not hid to Rusticks, who after they have sowed their seed, do ardently expect the warm Sunshine. Therefore, for a desirable coming up of Vegetables out of the Earth, and their encrease, there is required a fat and salt Earth, as also the warm and fruitful heat of the Sun, with

necessary Rain; which also is to be understood of the generation and multiplication of Animals.

NB. In *Aurum Potabile* salt supplies the room of fatness, Gold is the Sun, and the Spirit of Wine performeth the Office of the warm and fruitful Rain; so also no Minerals are procreated, but by the help of the sun, and labour of salt. They exercising their operations upon the Water, generate Minerals, as the Writings of the ancient Philosophers teach.

Some ignorant man may here object and ask, How it can be, that the Sun, by operating in the depth of the Earth, should generate Minerals and Metals of salt? Let him know, that the Sun, by his hot Rays, doth excite the central fire in the profundity of the Earth; which central fire is not unknown to those who are occupied in digging Metals out of the Earth, who sometimes feel so strong a heat, that laying aside their Clothes, they are constrained to labour very leisurely, yea, sometimes wholly to intermit it; as I have taught in *The First Part of my Mineral Work*. Therefore no man of a sound mind will dare to oppose these things, seeing that it is wholly agreeable to Truth, that generation and encrease in all Animals, Vegetables, and Minerals, do arise from the sun and salt, to which water is wont to be an help.

Seeing therefore that my golden Liquor is prepared of such subjects, it can operate no other thing than fertility, and thereby signed by Nature with that beautiful greenness, by which it signifieth its endowment to render all things fruitful: God adorneth nothing with His marks and signs in vain; from which, as from His signatures, the powers and virtues may be more clearly known, than from Books. For the signature with which things are

signed by GOD and Nature never erreth; but the Books and Writings compiled by Men very often erre. Wherefore did the ancient Philosophers and Poets worship *Venus*, the Goddess of Love and of Generation, and attribute to her a beautiful green, generated of the spume or foam of the sea? What is the foam or froth which the sea calleth out upon the shore, but salt, which being dried up by the heat of the sun, is reduced to salt? And the Poets, especially *Virgil* and *Ovid*, who were men of great literature, would not have handled such things with so prolix an ambage of words, but that they were willing by their Fabulous writings to reveal that great Philosophick Mystery to the world: Therefore I constantly assert, That this green Liquor is the chief Medicine of all things to grow or be encreased, as its pleasant Viridity and infallible Experience do testifie. The Ocean, the Mother of all fertility, sheweth also its greenness, especially in those places where it is rich in salt, and strongly irradiated by the Beams of the Sun. This is well known among Seamen, who from the change of the water into a greener colour, presently collect, that they are near to hotter Regions, in which the Sun-beams are more strongly projected; for in such places the Sea is so salt, that it shineth like fire: The Urine of those pissing out of a ship, falling into the Sea, sheweth like sparks of fire; there four parts of water are found to contain one part of salt. The Mediterranean Sea is not so full of Salt, as that which is between *Spain* and *France*; and again, in this it self is found not a little difference, seeing that the *Spanish* side exceedeth the *French* in saltness; and the Ocean it self, by how much the nearer it is to the North, by so much it is less salt; for which reason also the salt is weaker, and of less Virtue, being more remote from the beams of the

Sun. Therefore the *Danes*, *Sweeds*, and other Nations, inhabiting the Northern parts, although they have plenty of Sea-water, nevertheless they do not make salt of it, but fetch it from *France* or *Spain*; which is a Testimony evident enough, that salt is elaborated in the water by the most ardent Beams of the Sun, and produced for the sake of an universal fertility.

This is indicated by the *German* name of the Sea, *Meer*, which is all one as if we should say *Vermeer*, that is, *Encrease*, *Enlarge*. An Appellation very well agreeing with the thing, because without the Sea nothing would encrease in the Earth, but on the contrary, all things live, and are encreased by it.

Hence the green colour is a manifest Index and Signature of Fruitfulness, which might be demonstrated by infinite examples, which, for the avoiding of prolixity, is not here necessary, seeing that the thing it self is so manifest.

Some profligate Deriders, who love to oppose the Truth, may say, That this green colour doth not proceed from Gold, but from Copper, that so they may draw honest men away from the Truth, because no Gold seemeth to them to be of use in Medicine; with which Cavil they have before now accosted my *Aurum Potabile*. That I may stop their impure mouths and obviate the frivolous Objections of this sort, I say, that I indeed confess, Copper among the Metals doth obtain a green colour, if it be dissolved in *Aqua fortis*, and other corrosive Liquors of that kind: But Gold being dissolved in the same, appeared in a yellow colour, and not a green, which is known to every body. But who would think me to be so stupid and rude, to impose upon any so open a Cheat? Who also in any wise could hide such a Cheat? For Copper being dissolved in salt waters, would presently

discover the Fraud, by its evil nauseating and Vitriolick taste, of which but one drop being swallowed down, would excite violent Vomitings, and would not be a Medicine, but rather a Poison. Moreover, if you put a Knife into such a solution, it will be presently covered over with the Copper, and appear to be Coppery. The contrary plainly happeneth, if any pure Iron be dipped in my Green-Lyon; for it will presently appear to be gilt with the colour of Gold, and that more fair and eminent than any Ducat, or other piece of golden Mony exhibiteth. If any Iron-Wire be put into it, and there left for a certain time, it will at length be changed into a pure Gold, which is an infallible testimony, that that Liquor doth not draw its original from Copper, but from Gold. Again, it may be objected, that a vulgar solution of Gold by *Aqua Regia*, also tingeth Iron with a golden colour, and adhereth to the same; therefore this is no strange thing, forasmuch as it is common and known to every man. I answer, That such a Solution, not green, but yellow, doth indeed by precipitation adhere to the Iron, and dissolved the Iron it self, and reduced it into a Mud, but doth not penetrate it, and preserve it in its form, as my green Liquor doth, which therefore is not to be numbred among those corrosive solutions; but that which is done by the *Sal Enixum*, is rather to be called an Extraction than a Solution: For my *Sal Mirabile* is of that nature, that it doth not throughly dissolve any fine Powder, or Calx of Gold, but only extracted from it whatsoever is most pure, and leaveth the rest like a black Powder. Moreover, that Solution is not corrosive; for if it were, it would corrode and dissolve the Iron, and not tinge it with the colour, and advance it to the degree of Gold, the Iron remaining whole. By a like reason the green Solution

of Copper, made with the vulgar corrosive waters, associateth it self with the Iron, in a green colour, corrodeth it, and forsaketh the Copper. But if Copper be dissolved with my *Sal Mirabile*, that solution doth not penetrate Iron, but transmuteth the whole in its own form into Copper, yet not presently, but in a long progress of time.

From all these things may be seen the great difference between the vulgar corrosive solutions of Gold, Copper, and other Metals, and mine, void of all corrosion, which is performed by my *Sal Mirabile*, dissolving the Bodies of the Metals, after a far other manner than those corrosive solutions are made. Therefore it is not to be reckoned among vulgar solutions, seeing that it possessed far other Virtues. The vulgar solution of Gold, made by *Aqua Regia*, hurteth all things, as a corrosive Poison; a little of it being put to any Vegetable seed, deprived it of all its growing faculty, and throughly killed it. Some drops of it being drank by a Man, would corrode his throat and stomach, like Poison. A Liquor of this sort, by its corrosive and gnawing faculty, converteth the Metal put into it into slime or mudd. That solution which is made by the rectified Spirit of Salt, may safely be taken by any, when a sufficient quantity of Water is mixed with it; but it is not sweet, it constringeth the Tongue, and staineth the Hands; this doth not my green Liquor, for it neither coloureth the Hands, nor astringeth the Tongue, nor yet corrodeth the seeds of Vegetables, but rather exciteth them to fertility.

Whence it appears, that my said *Sal Mirabile* is not corrosive, but by it self is a good Medicine for all Vegetables, Animals, and Minerals, which Experience it self most evidently argueth: Therefore it can work nothing but good, because prepared without any

Corrosive, and represented to the eye by a wonderful signature, to wit, the fair Green colour.

This signature is an undoubted token of its extraordinary Virtues, in rendering all living things vegete and fruitful, which lie absconded in its inward Penetrals. And this I think sufficient to be said to those foolish and idle Cavils of ignorant Scoffers, with which they may insult over me.

Whatsoever I have here ascribed to my Green Lyon, my red *Aurum Potabile*, extracted with Spirit of Wine, also performeth the same, and that as well in Vegetables and Animals, as in Minerals; for the Spirit of Wine can hurt none of them, but rather insinuateth the virtues of Gold into Vegetables and Animals, and rendereth them more efficacious. But concerning the solution of Gold by my *Sal Mirabile*, and its efficacy and operation, this may suffice for the present.

As for the solution of the other Metals, there is no need to make many words, or to write a large Volume about it, seeing that from what hath been already said, any man may easily conjecture, that solutions of this sort, made by the help of *Sal Mirabile*, are far better than those made by Corrosives. The Vitriol of *Venus* made by its help, doth not hurt Vegetables, as common Vitriol, which killeth the same by its corrosion; but the Vitriol made by *Sal Mirabile* wonderfully promoteth the growing faculty in Vegetables, so that Lunar, Venereal, Martial, Jovial, and Mercurial Herbs may be produced, which will have wonderful effects, especially if the Vegetative faculties of Lunar Herbs be encreased and promoted by the Salt of Luna; of Venereal, by the Salt of Venus, and so of the rest.

Enough hath been spoken to the Wise, but he that

hitherto cannot apprehend what I have said, is an Ass, and unworthy of such *Arcanums*. From this Foundation a diligent Physician may erect a far other method of Curing, and may prepare for himself such Medicines, by which he may obtain Honour and Wealth. I have for many years observed, that Herbs are wont to acquire Martial faculties and properties, if they grow out of a reddish Martial Earth, although they were not before of a Martial nature, but of a Solar, Lunar, Venereal, Jovial, Saturnine, or Mercurial Property.

But how much more would the innate properties and virtues of Herbs be strengthened and encreased, if they were not nourished by the Dung of Animals, but set in pure sand and watered with *Sal Mirabile* impregnated with the virtues of Metals, and thence acquire the promotion of their growing faculty. Truly other Herbs of far greater Virtues, and other odours and tasts, would be brought forth, than the common, which are wont to be produced by the Dung of Animals, and the simple Salt of the Earth. By this means so strong an attractive Power may be conciliated to the Seeds of all Herbs, that by a Magnetick power they may attract to themselves the Astral powers and influences, and so encrease their Virtues, that without any Preparation they might be able to cure all Diseases to admiration. NB. That it is necessary, that he that would exactly understand the nature of Herbs, should know how to promote the vegetative faculties of Solar Herbs, with Solar Salt; of Lunar with Lunar, and so of the rest, and not that he should intermix the one with the other, without any consideration; which without doubt would be a hindrance to the desired success.

Consider these things with an accurate Meditation,

as great Secrets and *Arcanums*, which will not be revealed to the perverse World. A word to the Wise is enough; therefore I will add no more; but I make no doubt, but that this Revelation of my *Sal Mirabile*, in process of time, will be accepted by diligent Physicians, and bring so much benefit, that they will by the same effect much good in comforting and curing the Sick. All things have their time, so also this Arcanum, which in its time will be in vigour; but I would not have any man perswade himself, that he may fish out of me the Preparation of my *Sal Mirabile*, I will not *cast Pearls before ingrateful Swine*, but will reserve them for Friends. But lest an occasion should be given to ignorant Deriders, and those that hate me, of calumniating and slandering me, as if I my self were ignorant of preparing of a Salt of this sort, I have determined to deliver some small portions to divers prudent men, not of this Salt only, but also of those Salts which are endued with the Virtues of Gold, Silver, and other Metals, that at any time they may be able to exhibit a clear Testimony of the Truth: And I will produce those Herbs themselves, that I may have them in readiness to shew to others.

Therefore let no man trouble me with his Letters, to ask of me this salt, or other Medicines, for I will communicate them to none, but such as I know, and with whom I am familiar.

Great Thanks are to be given to Almighty GOD, who hath made this present unworthy World partaker of such *Magnalia*. I have sought, and have opened the way to others; let another also seek, and enter by the way I have shewed, that insisting in my footsteps, he may by the easier labour, obtain a greater light of Nature.

But that I may omit nothing which pertaineth to the good Institution and Doctrine, and concerneth the glory and honour of Salt, I will yet over and above add one infallible Testimony, by which any rude and ignorant man may evidently see, that all fertility consisteth in Salt only, and that it is the most precious Treasure of the whole World, for the health of the Body, and that in it lie hid most ample Riches.

Fertility is indeed already demonstrated in many foregoing Testimonies; but because the History of the Prophet *Elisha* agreeth more than a little with these my sayings, and may be a clear Testimony to them, I have thought fit here to adjoin it. We read in *2 Kings*, 2. 19. that the men of the City said to *Elisha*, *Behold, it is good to dwell in this City, as my Lord seeth; but the water is naught, and the ground about it is barren: Bring hither to me* (saith he) *a new Vessel full of Salt*. Which being brought, he went to the Spring into which he cast the Salt, saying, *Thus saith the Lord I have healed this Water, from henceforth there shall no dearth and barrenness arise thence*. So the Water was healed even to this day, according to the word of *Elisha* which was spoken.

That this great Mystery may the better be understood, it will be necessary first a little to consider the History it self, from which it may be known by what means the Salt of *Elisha* became so strong, that it expelled Death, and rendered the Water good, and the barren Earth fruitful.

When *Elias* was to be carried up into Heaven, he said to *Elisha*, Ask of me what I shall do for thee, before I am taken from thee. *Elisha* asked of *Elias*, that he would grant to him a double portion of his Spirit: *Elias* answered, *It is a hard thing which thou hast asked; if thou shalt see me when I am taken from*

thee, it shall be as thou desirest, but if not, thou shalt obtain nothing. And when they went on together talking, behold, there cometh a fiery Chariot with Horses of Fire, and parted them asunder; so *Elias* was carried to Heaven in a fiery Chariot; and *Elisha* seeing this, cried out, *My Father, my Father, &c.* Listen therefore, Wherefore did *Elias* say to *Elisha*, *If thou shalt see me when I shall be taken from thee, thou shalt have thy desire, otherwise not*? And why with this condition? Could not *Elias* at his own will have rendered *Elisha* the possessor of his wish? Perhaps very easily, but *Elias* would not without some *medium*, because *Elisha* was to be doubly seasoned with the Celestial Fire, by which he was separated from *Elias*, for Fire bringeth forth Salt; the Celestial Fire bringeth forth a Celestial Salt, and the Elementary Fire an Elementary.

In this History is set before our Eyes the eternal Divine Light, and also the natural, although few discern either of them, inasmuch as their hearts are hardened and obscured by a horrid blindness. And both the Old and New Testament are full of such Mysteries; so that I dare boldly affirm, That all the Treasures both of Soul and Body may be found in the Holy Scriptures, if we will; and that we have no need to read the Writings of the Heathen Philosophers. I add this one thing, That it is of God alone to open the Eyes of those who desire to understand Divine and Natural Mysteries; for without divine illumination, all things are dead and buried in darkness. This Truth putteth to flight the diabolical Cavils and Slanders of all scoffing Mountebanks and Jack-puddings. But which of them will oppose this, and seek fertility from any other thing than Salt? Truly, I believe no man, except that most profligate *Farnner*, with his wretched Followers, who

determine, That Salt doth not fatten, but Dung; when nevertheless this is to be ascribed to the former, and not to the later. But those Ass-like Brethren of Ignorance, being convinced of their filthy Lyes by the most evident Truth, will I hope have their impure and shameless mouths more than sufficiently stopped. I therefore acquiesce in this demonstration, in which I think I have evidently proved, That the Sun and Salt are the most noble Creatures of God, and that Salt is by me rightly and deservedly called the greatest Treasure, and the greatest Riches of the World; because after an earthly manner of speaking, nothing can be more desirable for fruitfulness. Salt is the Original of all fertility, the Sun is the original of Salt, and God the Creator of all things, of the Sun, to whose Name be Honour and Glory for ever, *Amen*.

But although this demonstration, which doth evidently shew, that salt is the greatest Treasure in the world, be most clear, and beyond all doubt; nevertheless, I doubt not, but it will not satisfie the Covetous, who will say, Where is the *Stone of Philosophers* which we expected from thee, as the greatest Treasure of the whole world, that it being known and acquired, we might lead a brave life? But stay, my friend, until some man shall come and render sordid men partakers of so great a Gift: For thinkest thou that if I its possessor, that I would describe so great a Mystery, in such clear words as I have described the fertility of the Earth: Not at all; nor have I the power of doing that, seeing that a man cannot give to any those things which are not his own, but God's. Nevertheless, that the pious searcher after Truth may have some manuduction to a Work of so great moment, I cannot but hold forth to him that small Light granted me by Divine Grace, provided he hath not Owls eyes, shunning the light

of Nature, because they cannot bear its splendour; which if he hath not, it cannot be, but he will give credit to a manifest Truth. And concerning so great a work, this is my opinion, That it is altogether possible, that the most noble universal Pearl, to wit, the Medicine and Stone of Philosophers, restoring the diseasie Bodies of Men and Metals to their pristine health and state, may be prepared of common salt: But of the Preparation, which is unknown to me, I can affirm nothing certain; but that it may be done, manifold and infallible Experience hath caused me to believe; which Experience I keep to my self, and will not part with it to any, although I could very freely, if I might or durst make pious men partakers of it: But because Faith is effected in us by God alone, it is to be sought from Him by Prayer, and not to be expected from Men.

Therefore that (according to my promise) I may demonstrate, That the Stone of Philosophers, lying hid in salt, may be got out of it by the benefit of Art, I desire only this thing of the studious of divine Mysteries, that he would search after those things, in my Writings lately printed, which I have spoken concerning the little Fish *Echineis*, *viz.* by what means he may be taken with a Net out of the salt Sea, for there he will find a sufficient manuduction, of which it is not necessary that I should here say any more. Those are the things which I was willing to add in honour of that noble creature salt: He that will not believe the most noble Pearl, of a universal and particular Medicine, to be included in the inward Penetrals of Salt, I cannot help him; it is free for every man to seek and walk in another way.

Would it not be too tedious, I could also plainly prove, that from marine Bodies, (as Coral, Mother of

Pearl, Oyster-shells, and the like things, being dissolved into water, and precipitated) may be extracted corporal Gold, which I have done with my own hands, and therefore can boldly witness it.

But I will shut up the Tables, what I have hitherto spoken being sufficient for this time; from which I hope and believe that others will receive benefit: Which I heartily wish, together with the divine benediction to all pious men. *Amen.*

A

TREATISE

Of the Signature of

Salts, Metals, and Planets.

OR,

A Fundamental Institution evidently shewing by what means not only the Virtues, Signification, Nature, and Properties of *Salts*, *Metals*, and *Planets*, may be easily known, but also the reasons of their Names and Appellations, and this not from Books or Writings, but from their naked Signature, to be obtained and known by the help of the Circle and Quadrant.

Written for their sakes who delight in the

Profitable and highly Necessary Contemplation of Divine Miracles.

To the well minded READER.

It is a common saying, *Beware of those whom Nature hath marked*, the which is indeed true, if it be understood concerning men who are insignized with some preternatural marks, or of the abortions of Nature, but concerning other things it is false. For the Almighty God hath signed all His Creatures, as well small as great, equally with their own certain signatures, and hath as it were subjected their depicted Lineaments to the Eyes of men, by which they might know what the nature and property of every thing is, and what Commodity and Profit it may bring to mankind. Hence not only all Vegetables, as Herbs, Shrubs, and Trees, but also Animals, as Beasts of every kind, yea, and Man himself, which abide upon the Earth, the Fishes inhabiting the Waters, and the Birds of the Air; but also all things moveable and immoveable, he hath signed with their peculiar forms and figures, to signifie to us by those their signs, of what use every Herb, every Animal, every Bird, and every Fish is, and for what purpose it serveth. And this is the Divine Inscription which the Divine Finger hath written upon all things, and by which the nature of all things should have been learned by us.

But after that Men began more and more to decline from the humane, to a brutish nature, and ceased to have the Reason of so noble a Signature, preferring their brutal Conceptions to the Divine Works, and postponing the Signatures incited in all things by Nature; it came to pass, that in a long process of time that true Signature, or Divine

Inscription, being obscured, perished by degrees, and wholly vanished; so that but a very few are found in this Age, who are endowed with any knowledge of so great a Science; for the greatest part of men are wont to follow the duct of Books and Writings, and study to learn the Virtues and Proprieties of things out of them. Neither could this study be disapproved of, if the true, incorrupted, and entire Writings of the ancient and singularly-experienced noble Authors remained with us. But because in a long Series of time their frequent descriptions, emendations, and interpretations have so corrupted them, that scarce any thing of truth is to be found in them; it were far better that such mangled and corrupted Writings were not so much followed, but that rather that old foundation laid by God himself, upon which all those Writings, all Characters, and all Signatures do rest, and from whence they have received their beginning, should be again brought out of Darkness into Light, and the nature and properties of things learned from thence. This would be the true way of coming to the knowledge of Nature, in a short space of time, without so many errours, to which, by those false Writings, a man cannot come in many years.

Some perhaps may ask, where that ancient Foundation laid by God ought to be sought, or where it may be found? I answer, Every where, inasmuch as it is before the eyes of every man, but especially shewing it self in the Heavens, where the Sun, Moon, and all the Stars are constituted by God in a round Figure, signifying to us that all Forms and Figures take their beginning from a round Circle, and that a Circle or Rotundity it self, as a most perfect thing, pertaineth to the Heavens, and to GOD Himself. The Ancients certainly put it in that manner, that by a round Circle they might denote those things which

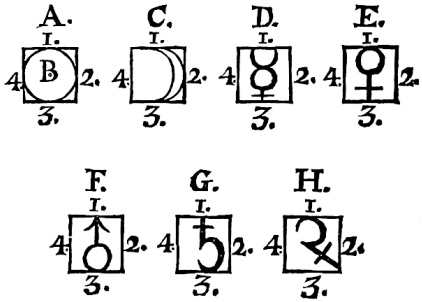
they could neither comprehend by number, pronounce by words, nor conceive by their ingeny; and on the contrary, those things which did not exceed their capacity, ingeny, nor number, they signed with a square Figure: So that things celestial, and exceeding humane capacity, they have denoted by a Circle, but things visible, earthly, and subject to humane capacity, by a Square, proceeding from a Circle.

And although the same ancient Philosophers, attributing a Circle to God only, were of the opinion, that God could not be more aptly exprest by any thing than a Circle, having (like Himself) neither beginning nor end: Nevertheless all those things which after God they esteemed great, they also noted with a Circle, to wit, the Sun in the Firmament, and Gold in the Earth; the first of which, some of those Philosophers thought to be God himself. Others of those Heathen Philosophers have feigned for God the Effigies of a Serpent, winding himself into a round Circle; and all earthy things of a celestial original, they have represented by a Square, and so they have shadowed out the Celestial and the Terrestrial, by the Circle and Quadrant.

Therefore as they observed how much of the Celestial or Terrestrial Nature were in the things to be signed, so much of the Circle or Square they added or substracted, and according to that they varied their Figures: And not only in the Celestial Lights, to wit, the Sun, Moon, and other Planets, but also in all earthly Creatures, produced in the Earth by the operations of the Sun, Moon, and the rest of the Planets and Stars, *viz.* Gold, Silver, Copper, Tin, Iron, Lead, and Argent-vive; they have used this manner in signing them all with Characters of this

sort, and have noted them with the same Characters which they have given to the Celestial Lights, producing and effecting the Causes of those inferiour Creatures. So the Sun and Gold, as the most perfect Creatures of God, are signed with a Circle having a point or center in the middle; the Moon and Silver appear in the figure of an half Circle, or of two semicircles, at a small distance from one another; which shew their Bodies not to be absolutely perfect, but as yet to labour under some defect. The Characters of the other Planets, as ♄, ♃, ♂, ♀, and ☿, are also the Characters of the rest of the Metals, *viz.* Lead, Tin, Iron, Copper, and Argent-vive, because they are much more vile and imperfect than Gold and Silver, and are noted with more imperfect Characters; such are an half Circle and half Square, signifying that they scarce answer to the perfection of Silver in the half part, and hardly to the fourth part of that of Gold.

But that I may propose the thing more clearly, I think it necessary to inclose the Characters of the Celestial Lights, as ☉, ☽, ☿, ♀, ♂, ♃, and ♄, and of the Terrestrials, as Gold, Silver, Argent-vive, Copper, Iron, Tin, and Lead, which the ancient Astronomers and Philosophers have imposed upon them, in Squares, consisting of the same magnitude, that by those it may appear in what degree they differ from each other in perfection.



Here those Characteristick Figures of the Signatures are enclosed as it were in little Houses, which are the Squares: Now, if into one of those I put the Character of the Sun or Gold, *viz.* a round Circle noted with the letter B, it toucheth four parts of the Square, marked 1, 2, 3, 4, and filleth it up, signifying that among Celestial and Terrestrial Creatures, the Sun and Gold do excell all other things, in their perfection.

The Character of the Moon or Silver, under the letter C, toucheth three sides of the Square, to wit, the superiour with the top of her Horn, marked 1, the lower side marked 3, and the bending of her back toucheth the third side, marked 2; but by reason of the incurvating concavity of her Superficies, she cannot touch the fourth side, marked 4.

The Character of *Mercury*, under the letter D, with both his horns toucheth the upper side of the Square, marked with number 1, and with the bottom of the Cross the lower side number 3: the other two sides, 2 and 4, he leaveth untouched, so that the half part of the Square remaineth untouched by *Mercury*. *Luna* toucheth three sides or the same, and *Sol* or Gold is contiguous to all the four sides.

Venus or Copper, under the letter E, also adhereth only to two sides of the Square, to wit, to the

superiour number 1, and to the inferiour, marked with the number 3, but the sides, 2 and 4, remain untouched.

In like manner also *Mars*, or Iron, toucheth only the upper and lower sides, as you see under the letter F. So also *Saturn*, or Lead, under G; And *Jupiter* or Tin under H, you see touch but two sides of their Squares. Therefore from this figure may be seen in what degree of perfection the Metals exceed one another, so that he who hath respect to this figure, cannot erre in discerning the said degrees.

The Ancients have not imposed these Characters, neither by chance nor in vain, but they have directed the whole reason of characterising to this end, that the Character might exactly agree with the Nature and Property of the thing signed; as the great agreement between the Celestial Luminaries or Planets, and the Metals, doth clearly manifest. Nevertheless these things are not to be discerned by all men, but by those only who are able throughly to inspect the nature of Metals, and from that knowledge of the Metals, to know the said degrees of perfection; for so much of rotundity as exhibits it self in the Character to the sight, so much also of purity and perfection is in the signed body; and so much as it shews of the square, so much also it hath of imperfection: And this is a Chymical Axiom or Precept altogether infallible, and so certain, that he who in the emendation of Metals shall follow it, will not easily erre.

Gold, the most perfect of the Metals, by touching the four sides of the square, argueth its great perfection: Silver is not far from the perfection of Gold. And among the rest of the Metals, Argent-vive, Iron, and Copper have the half, but Lead and Tin

only the fourth degree of perfection.

These few things we think sufficient for those who are desirous of so great knowledge. He that desires to know more of these Harmonical Signatures, of the Celestial Lights, and Terrestrial Bodies, let him accurately examin this Foundation, and he will find those things which neither *Aristotle* long ago, nor our Schools at this day, have had any knowledge of. This I dare assert for truth, That the Ancients, in the *Egyptian* Schools, have hidden great Mysteries under the Characters of their Signatures, and not only in those signs imposed upon the Sun, Moon, Stars, and Metallick Bodies, but that they have manifested great Secrets by the very Names which they have given to all things, which was not by chance that they have given to this thing such a Name, and to that another: But when after times changed many Names, thence it happened, that those Signatures fell into great uncertainty, and are now perplexed with many doubts. The Names which from *Adam*, *Noah*, and their Posterity, were in use with the *Egyptians*, *Chaldeans*, and *Hebrews*, the *Greeks* also had in use, and from the same Foundation called things by due and true appellations. The *Latins* have taken no care about those derived to them, although the only and true Foundation of every Investigation of those Secrets is placed in those. Indeed I being ignorant of the *Egyptian*, *Chaldean*, and *Hebrew* Tongues, know not how to interpret those Names with their signature. But one that is skilful in those Languages, and endowed with some knowledge of natural light, by applying himself to such searches, by a prudent inquisition, will find the Truth of those things which I have here written, to wit, That the Nature and Property of all things are posited in their Names and Characters: I will expedite the matter by a clearer

Explication, and in a few words expound the Circle and Quadrate. In my Treatise of the *Nature of Salts*, I have clearly taught and demonstrated, that all things in the World have their original from the Sun and Salt. The Ancients have designed the Sun by a Circle, and Salt by a Square: But as a Circle is first drawn before that a Square can be put to it; and as a Circle by right is preferred before a Square, inasmuch as that is the Original of this; so also the sun is to be preferred to salt, to which it hath given Rise, and which it hath preceded in its existency, and which being compared with the sun its Original, is less to be esteemed: Hence, without the sun, salt generateth and produceth nothing; nor yet the sun without salt, because in every generation and production there is necessarily required the conjunction of Male and Female, the sun performing the office of the male, and the Moon of the female.

So *Eve* the Female, as a Square, arose from *Adam*, as from a Circle, and from both, to wit, from the circle and the square conjoined, the fertility and propagation of mankind hath drawn its original. The Poets have attributed this propagation to *Venus*, and noted it with a sign composed of a Circle and a square, saying, that the Goddess *Venus* was born of the froth or foam of the Sea and Salt, and dried up by the Rays of the sun.

The Character of *Venus* being weighed with an accurate consideration of mind, very perspicuously sheweth how wisely and prudently the Ancients have shadowed out the Mysteries of Nature by their Characters.

Venus is signed with a round Circle, with a Cross pendant from the Circle; the Circle denoteth the Sun; the Cross, Salt: For when four lines are conjoined in

their extremities, they make a Cross, all the ends meeting in one point. But if all those Lines be disposed foursquare, they form a Quadrate. Therefore in things signed, the Cross and the Square differ only in their external Figure, and signifie one and the same thing.

That this Mystery may be the better apprehended, I will interpret the true signature of those principal Creatures of God, (to wit, the Sun and Salt, from which all things proceed) attributed to them by the Ancients, according to their Latin significations *Sol* and *Sal*, that their degrees and difference in nobility and goodness may evidently appear: For the more Circles there are conspicuous in those words, the more of purity and goodness they argue to be in the things which they denote; and the more Squares there are in a Word, the more of earthiness, imperfection, and impurity is shewn to be in the thing thereby signified. But this Rule holds only in those words which were imposed upon things by the Ancients, in others not.

Seeing therefore that it is beyond all doubt, that these two words, *Sol* and *Sal*, were by the Ancients imposed upon the things they signifie, according to a true signature; we will therefore further explain them.

And here it is first to be noted, that all the forms and figures of Vegetables, *viz.* of Trees, Herbs, and other things growing out of the Earth, and also of Animals, whether Men or Beasts, also of Minerals, do take their original only from the circle and square, so that by those it may be known what bodies or members are round or long; for the Body of a Man, as also the Trunk of a Tree, have not only a round, but also an oblong figure, and the joints of every

finger, and the leaves and branches of Herbs and Trees shew forth the same figure, so that in those the Circle and the Quadrate are every where found.

And not only all the Creatures of God are noted with the same signature, but also all Writings and Letters, proceeding from *Adam*, *Noah*, and their Posterity, have taken their beginning from the Circle and Square. As for example: All the Latin Letters, even from the beginning to the end, you shall find to be composed of a circle and a square. *A* containeth two lines and a half of a square; *B* consisteth of two semicircles, and one line of a square; *C* is a semicircle; *D* is formed of a semicircle, and one line of a square; *E* hath three lines and a half of a square; *F* two and a half of the same; *G* consisteth of a semicircle, and half a line of a square; and so on to the last Letter of the Alphabet: So that all the Letters being composed of a circle and a square, were left by the Ancients to shadow out and signifie those Mysteries to Posterity.

Therefore seeing that in my Treatise of *the nature of Salts* I have evidently demonstrated the Sun and Salt to be the beginning of all things, I think it necessary to interpret those two words, *Sol* and *Sal*, according to their nature, and to prove that they are the true beginning, and true end of all things.

Between the words *Sal* and *Sol* there is no other difference, but the middle letter, which in *Sal* is *Alpha*, but in *Sol Omega*; by which two Christ manifested himself to St. *John*: But the initial and final letters of both words are the same, they are distinguished only by the middle letters, *Alpha* and *Omega*, and that not without great reason; for as *Sol* generateth *Sal* from the beginning, and all things which are take their original from him, so also the

end of all things shall happen at the last day, when all things born and arisen from the Sun and Salt, shall again be consumed by fire, as *Peter* writeth, to wit, that the Sun, Moon, and all the Stars, shall fall from Heaven, and that the whole Earth shall be reduced to Ashes. Therefore in *Sol* and *Sal*, the beginning and end of all things are perfectly discerned. Neither do these two words only set before our eyes the beginning and end of all things, with the destruction of this earthy and fading World, but they also make manifest the whole Mystery of the Holy Trinity, which I could very easily demonstrate.

But because the *Egyptian* Learning, built upon the foundation of Nature, is lost, and in the room thereof Sophistical Schools have grown up, which by their vain loquacity have altogether oppressed and banished the truth; it might easily happen, that I might bring a Nest of Hornets about my Ears, if I should write such things publickly, as fly the knowledge of the learned multitude. Therefore it is better to be silent, than to incumber my self with unnecessary contentions.

But that we may see there have also been others, who were not ignorant of the Mysteries hidden in salt, it seems fit to me, in the end of this Discourse, to subjoin the opinion of a certain learned man, explaining the Greek word ἁλς, *Chap.* 13. *Book* 4. and as it were, bringing into view the great Mystery of God hidden in the same, that so we may be invited to read the learned Book of the said Author, concerning salt, which containeth many things highly worthy to be read, and of the reading of which no man will repent; the name of the Author is *Bernardus Gomesius*, printed at *Frankford*, in the year

1605, a Book truly worthy of any man's reading, and as such I studiously recommend it to those who are desirous of learning any thing of good.

But to return to my purpose, I seriously affirm, that the nature and property of Metals may be learned and openly known, not only from the signature assigned them by the Ancients, but also from that which the fire introduceth into them, and this signature proceeding from the fire, is far to be preferred to that of the Philosophers; not therefore because the Element of Fire possesseth a greater authority or might than all Philosophers ever had or can have: But because the Fire alwaies performeth immutable actions, and committeth no errours, nor can it commit any, provided the Operator who handleth the fire doth not deviate from the manner of operating, for at all times in one and the same manner it sheweth the signatures of the metals.

The nature of the fire is such, that whensoever we will, it exhibiteth to us, by a singular signature, the occult nature and hidden properties of the metals; for even as any burning spirit of Vegetables, or volatile salt of Wine, being drank by men, stirreth up their nature and properties, and exposeth these things to view, which before lay dorment, and which would not have been known, if the warm spirit of the wine had not manifested them: So also is it with Salt, which, as we have taught in the precedent Treatise of the nature of salts, hath a power and faculty of exciting the nature of metals, and of manifesting their medicinal Virtues. But the Fire, of which we here treat, hath the faculty of subjecting their perfection to our eyes.

For as by the pure spirit of Wine the vital spirit of a Man is presently cheered, and being awakened, the

hidden signature forthwith goeth out of the inward Penetrals of the heart; so that the Sanguine sing, dance, play, and are occupied in Amours; the Cholerick break forth into quarrels and fighting; the Phlegmatick grow drowsie and sleepy, and the Melancholy are taken up with speculations, meditations, and searches. These signatures the spirit of Wine can draw forth from the most inward recesses of men. By the same reason the signature of Metals is awakened, excited, and educed by the operation of the fire, *viz.* when they are melted in a Crucible; for the smoak or fume going out from them, presently indicateth the nature and property of every of them. Pure Gold, and free from all addition, emitteth no fume alone, but being melted with salt, giveth a purple exhalation. Silver alwaies exhaleth somewhat of a blue, bitter, and unpleasant fume: The fume of Copper is green, and stinketh: Of Iron not so much as Copper, being also red, striketh the Nostrils with a stink: Lead and Tin send forth a white fume, stinking and poisonous: Argent-vive, in its whole substance, vanisheth in a venomous fume, and these are the signs of the fumes, by which melted Metals, when they are not mixed, are wont to be distinguished and known from one another. But if Copper, or any other imperfect Metal, shall be mixed with Gold or Silver, it changeth the fume, and rendereth the proof or examen doubtful and uncertain: Nevertheless of the judging of the perfection of Metals by the Fire, this Experiment is of all the most perfect and certain, *viz.* when they are so melted by a very strong fire, that they move themselves, and are as it were turned or whirled about in the Crucible, and by how much the rounder this motion shall be, and the higher it elevateth it self, by so much it sheweth the Metals to be more

perfect; the more depressed and equal, and the plainer the superficies shall be, the lesser of perfection is in that melted Metal. The trial of this thing is easily made, by which it is found, that among all the Metals Gold is chiefly moved on the Test, or in a Crucible, by a round or spherical motion; next Silver; next to that Copper; next to Copper Iron; after Iron Lead; and lastly, after that Tin.

The same difference of perfection and imperfection is shewed by the pouring of a melted Metal upon a Porphyry stone, or any the like well levigated, and put into a Kettle of Water, so that the water may not touch its superficies, which is to receive the melted Metal: This therefore being poured out upon the said Stone, leapeth and divideth it self into many grains, greater or lesser, more round, or less round, according as the Metal shall be more or less pure. But of all the Metals, there is none more imperfect than Tin, which by effusion upon such a Stone, very rarely disperseth it self into grains, but if the effusion be dextrously made, it dilateth it self in breadth in a very thin form, like to writing Paper, so that it may be writ upon (by a stile or stift) like Paper, and folded and sealed, and sent to others, after the manner of other letters: Such letters made of Tin, are hurt by no Water, so that they may be of great use, where necessity requireth secresie in sending letters.

But that Tin spreadeth it self into such broad leaves, and doth not separate into grains, after the manner of Gold and Silver, the reason is its imperfection, which its before-mentioned signature evidently argueth, containing but little of roundness, and taking the greatest part from the square.

The knowledge of a metallick perfection is also

acquired from the rotundity of the metallick motion in the Examen of Saturn, or the separation which is made by Lead in a Cupel, where Gold, before all the rest boileth with a spherical roundness, and all the lead being sent away in fume, by the violence of the fire, remaineth on the Cupel or Test, in a pure, round, or spherical body, especially when there shall not be too great a quantity of Gold.

Silver doth not answer to Gold in its round body, in which it remaineth, yet it exceedeth Copper in roundness, which sometimes also remaineth pure and round, if it be in a small quantity.

Iron and Tin do not admit the Examen of Lead by the Cupel, for indurating the Lead, they deprive it of all flux, so that by combustion it is reduced into a powder.

Argent-vive is by the Fire wholly driven away into the Air, in which nevertheless keeping a perpetual flux, its signature of perfection may be judged of in the Cold, which perfection exceedeth that of the other imperfect Metals, and cometh near to gold and silver; for being diffused into small grains, it exhibiteth in running a round or spherical body, imitating melted Gold: So that it is not without reason, that the Ancients in its signature have used the signs of ☉, ☽, and a square; being within wholly Gold and Silver, if it be coagulated; the truth of which many Experiments have demonstrated to me, made by the Waters of gradation, as they are called; Experiments, I say, which I have performed in small Instruments, for hitherto I could not make them in great ones, and in a large quantity. If any young man shall have a desire to try the same, let him in the first place beware that he use not corrosive and eating waters, and by this means render the Argent-

vive more fugacious.

It behoveth that he seek and know true sulphur, which if it shall be red, he shall also bind it with a red bond; but if white, he shall preserve its colour constant, and bind it with a white bond; otherwise it is wont to vanish in fume.

These few things I could not pass by, but signifie to the studious of the Divine Signature of Metals and Planets. Let every one occupy the powers of his Ingeny in the exercise of this Science, that he may become expert in the wonders of things, especially of those which lie hid in the words or names imposed upon things signed by the Ancients, who have found out great Secrets, as well Celestial as Terrestrial, and have comprehended them in those. Some such words of the Ancients I would have interpreted here, but that in so doing I should have divulged those things which are not vulgarly known, for which cause it is better to pass them by in silence. He that will bend his endeavours to so great a Science, may obtain many wonderful things; but of these enough; it sufficeth at the present to have laid the Foundation, the rest I leave to him, who being prompt to the study of seeking, shall bring his mind to the acquiring of this knowledge; if he shall once get into the right path, he will find out more than he seeketh or desireth. Also Mountains, Woods, and Countries, by their signatures do not only indicate the Treasures and Riches, given them by God, but are also wont to foretell their own Fates, as their Rise, Encrease, and Destruction. It remains, that we briefly examin, and take a short view of the signatures of salts, with what notes or marks they are signed by God, and also by what they signifie their natures and properties; for without doubt, they have their signatures, and

especially the common and vulgar Salt, the which, wherefore should it not have its signature, seeing that it is the original of all other things? There is not found any Herb or Weed so vile, any Worm so abject, which wanteth its marks given it by God, by which it manifesteth to us its nature and virtues. I have above indicated the Sun by a Circle, and Salt to be designed by a square added to it: and in the Sun and Salt all earthly things as Vegetables, Animals, and Minerals, to have the beginning and end of their generation, propagation, and encrease; also all things being risen from the sun and salt, to be signed by the Almighty God, with certain signatures, from which their nature, powers, virtues, and properties may be known; neither have I only asserted, but also affirmed, that all the Mysteries of Languages and Words may be searched out and known by those signs, to wit, the Circle and Quadrate.

These things are so certain and true, that they are beyond all confutation, which I will make plain to every one, by one only Argument, not exceeding the Capacity of a simple Boy, if the envious Brethren of Ignorance, being lifted up by their great pride, shall refuse to undertake it. That the Sun is conveniently and appositely signed with a Circle, no man will deny, because it never sheweth it self to the sight in any other figure than a round fiery Sphere, which sign being attributed to the Sun, by the Ancients, so remaineth even to this day.

The Ancients have also signed Salt with a square, which by the length of time, and the negligence of men, hath vanished, so that every one hath signed the species of salts according to his pleasure, one in this, another in another manner; and by this occasion peculiar Characters are invented by almost every

Chymist, whence one useth not that which another doth. But at this day among them, for the most part, Salts are signed in the following manner. The common Kitchin Salt hath the Character of a Circle, cut by a line transverse: Salt-petre hath a Circle representing the form of an Egg, and cut by a line drawn from the top to the bottom; But who was the Author of those Characters to these Salts, I know not, neither is it much matter, whether a man know, or not know it; but without doubt they were men who had never seen Salts brought to their highest Purity: For vulgar salts, as they are every where found, have not their proper figure and form which they ought to have, and which they obtain after their cleansing: So the vulgar and simple salt, as it is made from the Sea, or salt Fountains, or dug out of the Earth, hath not its true and proper signature, neither can it have, by reason of its many earthy feculencies; but after all its fæces are removed, and it hath obtained a great purity and cleanness, its own true signature, to wit, a square then appeareth, and indicateth the sign which is due to it. I have already demonstrated this to be true in my Treatise of the Nature of Salts, where I have taught by what means every common Kitchin Salt is to be so purged, that it shall be no longer rough, foul, obscure, and astringent, but clear and transparent like Crystal, both in small grains, and greater pieces, of a sweet savour, and a square or cubical figure, and which way soever it is thrown, alwaies exhibiteth four Angles, like to a square, as if it were formed by Art: Going forth in this most pure form, it seemeth thus to speak to Mortals: *Here ye see my true and natural form, given to me by the Sun my father, in the body of the Water my mother, which the Earth indeed hath covered with a rough and vile Garment, but Art hath again taken it off (praised be*

God) restoring to me my pristine form, to the future advantage of many sick; therefore as I was created from the beginning, so now I appear, without any impediment, to perform those things for which I was appointed by Divine Creation.

If the Sun in the Firmament could by any accident be so defiled and corrupted, that he should lose his Light, it could in no wise be that any thing in the whole World could remain alive for one day. Which thing Experience it self sheweth us, when the Moon interposing between the Sun and our Eyes but for one hour, depriving us of his Rays; in which Case the Sun in no wise suffereth, nor is in any manner corrupted, but only hindred for that little time, from transmitting to us his vivifying Rays. Therefore if so small an Impediment in the Orb of the Earth can cause so many Diseases, and other Incommodities to men, why should not also the fæces obscuring Salt, eclipsing its natural form, and rendering it more ignoble, be a detriment and impediment to its Powers and Virtues? Let every man judge, if a gross and impure Salt can be as commodious to all Men and Beasts, as that which hath been restored to the highest purity of its Body.

Seeing therefore that it is the great interest of Mankind to enjoy such a pure Salt, I have determined to prepare a quantity of it, according to that manner of purging it, prescribed in my Treatise of the *Nature of Salts*, that I may be able to accommodate many therewith. I have hope, that at length the Eyes of Mortals will be opened, that they may see how for a long time they have been seduced by blind Leaders, and finding this, will have a greater regard to their own health. Truly there is but a very small Labour and Cost required for the cleansing of

common Salt, to free it from its earthy fæces, and render it clear, transparent, and in the Water of a Cubical Figure, and that without the addition of any foreign thing, only by solution, filtration, and coagulation of its own proper spirit.

If by these Operations you shall bring salt to its highest purity, you may boldly assert, that you have acquired such a salt as the pure Sun operated in the pure Water at the beginning; when the Sun, seated in the height of the Firmament, would very freely perform his Office, yet being hindered by gross and turbid Clouds, interposing between him and the Earth, whereby he cannot render us partakers of his all-warming Rays, we ought not to impute the fault to the sun, inasmuch as he is not in fault, but rather to those thick and dark Clouds, which hinder us of his splendour and efficacy.

So also is it with Salt, which would freely exercise the Gift bestowed upon it by the Almighty Creator, were it not hindred by its terrestrial fæces; therefore this impediment is not to be attributed to salt, but to the intervening fæces, which hinder its salutary virtues. If it were in our power to remove those thick Clouds from the sun at our pleasure, as it is to separate the earthy fæces from Salt, we might every year make our selves a very commodious Summer, which nevertheless cannot be done, seeing that God the great *Pater familias*, hath reserved this alone to His own Power.

As for the signature of Salt-petre, that certainly is very unequal, by reason of the great diversity of this Salt, arising hence, that it is well or ill purged, is defiled with more or fewer fæces, or other strange salts. The Common, which is required for the making of Gun-powder, is never perfectly pure, but alwaies

mixed with other Salts, which cannot be separated from it by the accustomed and usual manner of solution and coagulation: Hence also you shall find no salt-petre, which can have that true and genuine signature, which God and Nature hath given it.

For by whatsoever vulgar labour and pains the Salt-petre which is got out of Stables, is purged by Solution and Coagulation, it is yet impossible that it should obtain its due cleanness and signature. But to acquire that, it behoveth to use the following Operation.

First, some pounds of Salt-petre are to be taken, which are to be purged by Solution and Coagulation, and that to be so of ten repeated, untill it acquire that purity which it is wont to admit by this vulgar Operation. Being so cleansed, it is to be divided into two equal parts, and one of them to be mixed with white Potters-earth (or Tabaco-pipe-clay) of which little Balls are to be formed, to be dried in the Sun, and put into a Glass Retort well coated, or an Earthen one which will hold the spirits, that the pure spirit of Nitre may be Elicited by Distilation, and received in a large Glass adjoyned to the Retort, containing some Water, into which the spirit entreth freely. The other part of the cleansed Salt-petre, being put into a Crucible, is to be reduced into a fiery fixed Salt, by the casting in of Charcoal, Tartar, or the Stellate Regulus of Antimony, then to be dissolved in rain Water, and filtred through brown Paper: So much only of this Liquor of fixed Nitre, is to be poured drop by drop to the distilled Spirit of Nitre as will suffice for the fixing it. This Operation stirreth up a great noise, hissing and bubling, which ceasing, admonisheth to leave off pouring in any more, and indicateth that those two contrary

Natures, to wit, the acid spirit, and fixed liquor of Nitre have mutually satiated one another, and the corrosive spirit hath lost its corrosive nature, and the fixed fiery liquor its fiery quality, both returning to the pristine nature of Salt-petre. From this liquor, the Glass being imposed in sand, the unprofitable Phlegm is to be distilled off so long untill a Cuticula or thin skin appear at the top of the matter, the sand being cold, the glass is to be taken out, and set in a cold place, and let stand for one night to shoot into long and sharp Chrystals, to be freed from the rest of the liquor, by pouring it off. This liquor is again to be freed from its unprofitable Phlegm by distillation, and again to be exposed to the cold to Chrystallise. Whatsoever shall remain after every Operation, is again to be Evaporated in sand, till the Cuticle appear, and to be reduced to Chrystals in the cold, which Chrystals may be used as common Salt-petre. The Chrystals of the two first Operations, are once more to be dissolved in Rain Water, Filtred, Evaporated and again Chrystallised, which are now white as snow, and extend themselves into length, thin, sexangular, and so equal, as if they were smoothed with a Plain: For not the least roughness or unevenness is to be seen in their superficies, but they Exhibit the true and natural signature of Salt-petre. If any one shall be desirous of bringing this Salt yet to a higher purity, he may again divide this purified Salt into two parts, and from one draw the Corrosive spirit by distillation, and fix the other with Coals, and destroy both by Commixion, repeating the Operations as we have already taught, he will prepare a Salt-petre far more Excellent as well in Chymical as Medicinal Operations, as is manifest in many places of my writings.

If you Operate rightly all the Chrystals, none

excepted, will be straight, sexangular, and equal in length, without any roughness, or unevenness, which is the true and genuine signature of well purged Salt-petre.

NB. The fixed liquor of Nitre, being left in the Air for a long time, and afterwards Evaporated to a Cuticle, shooteth into small Chrystals, representing the Effigies of Stars, whose figure appeareth in a rotundity so neatly and pleasantly Constituted, that those six Rays proceeding from the little body in the center or middle, seem to be most exactly disposed and distributed to an equal distance and length, as in a circle. Truly it is an admirable and stupendious work of Nature, and a signature very unlike to the former, in as much as the six Angles of this, are comprehended after a Circular manner, but in the other they extend themselves only in length and sharpness. Those things which we have here delivered concerning the true signature of common Salt, and Salt-petre, the same are also to be understood of the signature of other Salts, which must be free from all their sordes and fæces, before they can shew forth their true signature.

Vitriol and Alum, which always shoot in a knotty and uneven Figure, after they have laid aside their defilements, exhibit clear and pellucid Chrystals, which yet will be much clearer it purged by several Operations. Yea, being reduced to their highest purity, they put on a Cubical figure like common Salt, nevertheless in Elegancy, Beauty and Pleasantness, giving place to that. Hence it is manifest, that nature is always ready for the gracing and adorning of her own fruit, if a helping Hand be afforded her by Art.

Before I put an end to this Treatise of the signature

of Salts, I think it fit to point out in what degrees of Dignity, those two Words *Sol* and *Sal* differ, and are distinguished.

The word *Sol*, containeth two Circles and the half part of a square, O. is a whole Circle; S. hath two semicircles, which being conjoined, make an entire Circle; this being cut in the middle, and the half of the section turned upwards, towards the right hand, and the other half downwards, towards the left; giveth two semicircles forming the Letter S. L. is the half part of a square.

The word *Sal* hath only one Circle, to wit, the Letter S. consisting of two semicircles: Also one square, constituting the Letters A and L, which argueth that the good which is in Salt is partly tempered with the other Elements, and partly combined with Earth. The Sun far exceedeth Salt in purity, nevertheless it is not absolutely perfect because the Letter L containeth the half of a square, which sheweth that it cannot be endowed with an absolute and perfect purity, neither is it as Telescopes at this day demonstrate, by whose help those solar spots have been observed in those times. Neither also ought it to have an absolute perfection, the which belongs only to God, and not to any creature, in the number of which is the Sun: Nevertheless that he is the purest of all creatures, there is no Man dare deny. Hence it came to pass, that the ignorant Heathens, attributed to the Sun Divine Honour, thinking that besides the created, there was as yet another uncreated Sun; That is, the Omnipotent God himself, the Creator of the Elementary and shining Sun, which according to the Words of Christ shall also perish at the end of the World. By a like reason there is a twofold Salt, *viz.*

one Eternal, Divine and Celestial; the other Terrestrial and fading. And as the Holy Spirit proceedeth from the Eternal Light, and Divine and Celestial Salt, for the warming and enlightening the Hearts of Men involved in darkness and for the defending our souls against the crafts and deceits of Satan; so also from the Elementary Sun or Fire, and the Terrestrial Salt, proceedeth that most noble saline spirit for the strengthening of humane Bodies, defending them against various Diseases, and preserving them in good Health. Therefore there is an Eternal and Divine *Sol*, a Celestial *Sal* and Holy Spirit; and also an Elementary, frail Sun, Salt and Spirit. But it is our Duty to Love, Praise, Honor, and Adore the Eternal Sun, and to him to commend the health of our souls. And to use and enjoy temporal and fading things for our necessities, with thanksgiving.

The Explication of the Word ἅλς *or* Sal*, by* Bernhardus Gomesius.

But before we undertake to expound such excellent places, it behoveth us to invoke the divine Being; that, that which cannot be fore-known by any Augury and Divination, we not erring, but being led by the Divine inspiration and instinct, may at length expound; seeing that in the treating of things so Divine and unspeakable (that being wanting) if we should erre, in might be unpardonable, but if we shall piously and happily prosecute the matter, universal thanks and praise may be given to God alone, and to Christ the great giver of Salt. First, therefore we are to shew what the Celestial Salt is, and by what means it may be distinguished from the Terrestrial Salt, of which Christ speaketh in the

Gospel. And because the Evangelical Words of Christ will be of great force to us in the speaking of it: And seeing that Christ when he would grace the Apostles with a high Title, called them the Salt of the earth: we think it not improper to call him the pure and undefiled salt of Heaven. For there is scarce any thing of so many preparations of an inferiour nature which excels the (as it were) Divine strength and efficacy of Salt in this part: For Christ and his blessed Humanity is the only Salt that is placed upon the Table of the Blessed. In whom Salt is the fullness of his infinite, inexhausted, and neverending divinity; which abundantly filleth both Heaven and Earth and all things therein; and then again making himself palatable to us, he exhibits himself to be tasted most sweetly by all Men. For from that all things that are, and ever were and that shall be hereafter, have both received their being, and are made perfect, and without it could not be, for his Divine seasoning, or become palatable to the seasoner.

So this salt endeavours to express his, in whose name are both in Greek and Latin three Letters in one syllable; or rather to adumbrate this one and the same Divinity common to the three Persons. For tho' the Divine mystery and sacred things are shut up in Letters chiefly with the *Chaldees* and *Hebrews*, because GOD spake by them: Yet they don't always want the Elements of the tongues, especially the *Greek*, which was both derived from them, and words construed from these things are not imposed from their power but from their propriety, as *Plato* the greatest of the *Greeks* supposes; For that the divine infinity and Immensity is exprest and explicated in Greek letters, is shewn in the *Apocalyps*, Cap. 1. where *John* saw and heard our Lord Christ preaching of himself, I am α and ω, the Beginning and the End.

For as the sun, when it lightly touches with its perspicuous light, by that its image and splendour it is forthwith given: So the Heavenly and Infinite Divinity, with all Goodness, as it were His Brightness, does not only leave His imprest Image in the things themselves, but also in Letters, with which those things are enlightened and made perspicuous. The like we have found in Salt, design'd in Greek notes; for that which in Latin is called *Sal*, in Greek is called ἅλς, express'd by the same Letters, though chang'd in order, and extended in three Letters, but one Syllable; but the Greek word expresseth both more plainly.

For the first Letter of it is α, which by its infinite roundness, as with two Horns, seems to be brought into the following Letters; which note plac'd with the Holy and Divine Trinity, signifies the first Person of it, to wit the Immense Father: Who as ἁλΦα, is an infinite beginning in himself; so the same pours out and infinitely communicates his Nature to other two Divine Persons proceeding from himself: in one of which by Generation the Son; but in the other by inspiration he produces the Holy Ghost. And further, the α shews it self, its certain divine Operation follows that Eternal, Infinite and never ending Power of the same Mighty Father, which also he sometime pour'd out from his Almighty Infinity, to procreate the Universe. As also in two horns, I mean Benedictions one is found to be in Creatures by the Creation of things; and the other in their Preservation; both by the Wisdom of the Omnipotent Son, and by the Goodness of the Holy Spirit.

But the middle Letter λ, is a Note full of sweetness: which is expressed with a Face, round, and composed for Mirth; and its Figure is not unlike a

Circle. For from the superior Angle two sides stretching backwards, seem to make a Triangle, yet without a base and without end, as the Letter it self expresses. Which note again relates to the same Trinity, and represents the second Person of it, to wit the Son, or Word proceeding out of the most sweet Mouth of the Father: In which, two eternal Relations, as they call 'em, as to Infinite sides, are found: the one whereby he relates to the Father, from whom he proceeds by his eternal Generation; the other whereby he is Related to the Holy Ghost, whom he breaths together with the Father by an eternal and infinite habitude, and without any intermission.

But this note λ, I mean Christ the Son of GOD, and Mediator between GOD and Man, is never when time presents, wanting in his most beneficent Actions: that he who had taken the Human nature to the Divine, and was made the Corner stone, might (as he has done) connect the two Walls, to wit the *Israelites* and *Gentiles* as two sides, when he built in himself a strong and safe Sanctuary for them both, that flying to Him, they might escape the fearful sentence of everlasting damnation.

Lastly, the Letter ς, concludes this Monosyllable. This note is design'd with a certain sinuous and Circumflext line drawn from hence and thence, which going from the two extreams in the middle, designs as it were two distinct semi-circles; out of which is shewn that they are made and constituted. Which lineament compar'd with the Trinity it self, adumbrates the third Divine Person, to wit the Holy Ghost. For that spirit proceeding out of the Bosom of both the Father and of the Son, by one and the same Inspiration, so knits those two distinct Persons, to whom he is co-equal and co-eternal, by an Infinite tie

of Love, that he remaining a distinct Person, might agree with them in their most simple, individual, and immense nature.

But as to the other Persons, so also his Communication is attributed to the Holy Ghost in time; which is wonderfully expressed by the shape of this Letter ç: Yet if we consider its lower extream, which seems as it were to arise of the former Letters of the Monosyllable, that is how it comes to be stretch'd chiefly towards the right hand: then from right to left, is wrested a little by ascending by a sinuous derivation: and thence at last, with the like following obliquity it ends again on the right hand. For the same Holy spirit proceeding from those two eternal and infinite Persons, as from an immense Fountain of Infinity, whilest from time to time he communicates his Gifts to the World, first those on his right hand, that is into the hearts of Men, he pours out to them that are illustrated and endued with the Divine Light of Nature: Then the same Light remaining, as it were bending from the right, ascending a little to the left, he brought forth the Mosaick Law written with the Finger of God, that is Dictated by him to the *Israelites*. Lastly, leaving the Mosaical Law on the left, he return'd to the right hand, and season'd the Evangelical Law deliver'd by Christ our Saviour, with his most Wise and Loving salt of Grace.

From all which, that which pertains to the business, appears from those three Letters of *Sal*, making one Syllable; and again, this unfolding it self in those three Letters, shews us, that there is in *Sal* a certain impress or image of the sacred and Individual Trinity, which we worship, Three in One, and One in Three. Which Trinity we should have had, as an

infinite, eternal, and inexpressible thing, commonly unknown, and incomprehensible, and as a most remote Salt, never heretofore put into an humane or Angelick Saltseller, we should have left untouch'd; unless at length the Divine Person of this Trinity, the Word, in taking the Humanity to himself, as it were Salt into a Saltseller, had presented to our taste so much Divinity; for this very Saltseller, both in figure, is covered with the eternal splendour of the Father, as also pointed and illustrated with the embroidered Notes of His Passion and likewise adorned with the Unction of the Holy Spirit is alwaies placed upon the Heavenly Table of the Blessed, to season their Food and solemn Banquets, after an eternal and ineffable manner; for in him all divine, and most sweet relishes and excellent tastes of His eternal Wisdom are season'd anew; for Christ Himself is not only the Heavenly and most Wise seasoner of the most opulent Feast, but also the very seasoning, and thing seasoned, and the Food which is so placed; for by Him his Heavenly Father, the King of kings, and magnificent Lord of lords, who out of His Goodness, and as He loves His good things, gives most liberally to all People a very large measure of Salt, that is, the help of His Grace to seek Him, and ask of Him Heavenly things.

True, that they who are called to the Heavenly Banquet may prepare themselves to come in this measure, and most happily sit down in it; but if (like fools) they refuse to come, the Measure being taken from them, they will be plung'd into eternal punishment. In which respect they may be likened to Flesh and Bones put into a Pot together, and water and salt put to them, hung over the fire to boil, and afterwards brought to the Table: Of which the Bones, which will be neither seasoned by salt, nor softened

by water, are thrown under the Table, to be broken by Doggs; but the Flesh, because it is made tender by heat and water, and takes the seasoning, is again sprinkled with a purer salt on the Table, and eaten with the greatest pleasure: For as Bones are to Flesh, so are Evil men mingled with Good: Of which these, when they will neither relish the Salt of Divine Grace, nor be washed nor softened by pure Water, nor warmed by the heat of the Heavenly Word to be willing to divine things, will by the severe Judgment of the great Taster Christ, at his magnificent Table, be reserved to the most exquisite punishments: Which obstinate and unseason'd Fools, He, for their hardness, finding unworthy his heavenly Table, plucks out from among the Righteous, and throws 'em down into Hell, there to be torn in pieces and devoured by those infernal Dogs, to all Eternity.

But the Good, who have been seasoned not only with the former, but also the later Salt, I mean with antecedent (as we say) and consequent Grace, and are not only adorned with Virtue, but have suffer'd all crosses and afflictions of this Life for Christ: These, as Flesh worthy His Table, the divine Taster offering to God the Father, He seasons with the new Salt of Glory; and though Aliens and Strangers, places them among the Angels and Citizens of Heaven, and with these Commands an equal Mansion of Blessedness to be given to them, though nevertheless they both come to the same felicity, by a different way of meriting it. For from what those above Angelical Citizens, from the very beginning of things, and since first a full desire seiz'd them, they have preferred the Heavenly Suppers of Christ to the mid-day Dinners of the most insolent *Lucifer*; they have deserved to follow those Oppipary, and (as they call 'em) Princely Banquets seasoned with the most

sweet Salt of Grace, and made resplendent with the shining light of glory.

But the Inhabitants of the Earth, and Men, strangers of Heaven, oppress by the great weight of a Body, and involved in the thick darkness, have made so long a Journey to the Country, by a far more tedious way of travelling; for the Universal occasion of desert is not to be snatch'd by those in the Journey of Life it self, and those under the terminative moment following the Creation; but they ought rather studiously and laboriously to take this by a continual and daily period of life, even to their death: Besides that, the Journey to the Country is so hard and wearisome, and exposed to so many dangers, brings so many anxieties upon strangers every where, leads them into so much anguish of mind and troublesome solicitudes, that it is plain, that not humane ability, but divine grace must cause, that strangers are not deficient in the way, or that they do not wander from the true scope or end of their Journey: Which would be the fortune of every one in the World, unless Christ, by divine Counsel constituted the *Parochian* of the whole World, who giveth to his strangers every where Salt and Wood, doth recreate and refresh them, and also lead them into the way that directs to the same Heavenly Country.

This may suffice to be spoken of the signature of *Salts*, *Metals*, and *Planets*, at this time. He that diligently weighs it, will search Nature deeply enough: If God grant me life, I shall publish a Tract of the *Signatures of Vegetables, Animals, and Minerals*; also in which I shall deliver many things good and profitable for all sorts of Men.

O Eternal, Almighty, Bountiful, and Merciful GOD and

Father, the Heat, Light, and Sun of Justice, enlighten and warm the hearts of all men, overwhelmed with a sleepy numbness, shadowed with thick darkness, and made rigid by an horrid coldness, that they may see, know, love, and fear thee, and give thee due Thanks and Praises for all thy Benefits, and at last awakened, they may receive that sight they had before lost.

O Eternal Word of God, most sweet, wholsom, and palatable Salt, Jesus Christ, recreate and refresh our sick and miserable souls, by thy Divine Virtue and Efficacy, that we being corroborated, neither Death nor the Devil may hurt us.

O Holy Ghost, the only Leader to Truth, who proceedest from the Eternal Fire and Heavenly Salt, comfort all the sudden and desarted Sheep, wandering this poison'd Marsh and Valley of Miseries, among devouring Wolves, and corroborate them, that they may patiently endure their Cross; and hereafter separate them from the stinking Goats, and bring all the Elect into the green and heavenly Pastures, that there they may continually behold the eternal Light, taste the heavenly Salt, and enjoy the fulness of Joy, *Peace, Grace, and Mercy for ever.* Amen.

THE CONSOLATION OF NAVIGATORS.

In which is Taught

How they who Travel by Sea may preserve themselves from Hunger and Thirst, as also from Diseases, which are wont to happen to them in long Voyages.

Written for the Help, Comfort, and Solace of all those who make long Voyages for the Good of their Country.

THE PREFACE.

Reader,

OUR SAVIOUR CHRIST hath prescribed to us this Doctrine, that we should behave our selves towards our Neighbour, as we would that he should do to us*; yea,* that we should love him as our selves*: This He hath earnestly commended unto us, as the indispensible*

Will of God, contained in the Law and the Prophets. But although there be few who consider this, and all men seek only their own, yet one or other is still found, who calleth this duty to mind, and as far as he can, taketh every opportunity or occasion of serving his Neighbour. Although also there may be some who bear a love to others, and desire to assist them with their counsel and help, and yet are destitute of a power of giving them any thing; for no man can distribute more than he hath. Moreover, Covetousness and Envy so far governeth some, who have plenty enough to bestow upon others, that they will do good to none but themselves; of which sort there are many now to be found in the World, and hence Charity towards our Neighbour is wholly vanished.

Seeing therefore that the Almighty, of His singular Grace, hath bestowed on me a small Talent, in searching out the Secrets of Nature, it is, without doubt, to the end that I should thereby do good to others; which Talent I would not bury, but have put to use in writing particularly from year to year, for the publick Good, and being affected towards my Neighbour, have made them publick. I have also determined, if time shall permit, to publish yet more and better things of this nature. But after that some described Voyages to the East *and* West-Indies*, and other far distant places, had happened into my hands, I perceived, not without great admiration what immense daggers occurr on the Seas, not only from Robbers and Pyrates, but also the adversitys of violent Winds, (to pass by many other Calamities in silence) by which the Ship, together with all in it that draw breath, are overwhelmed, and perish: And when I further contemplate those things with an intent mind, nothing seems to me more grievous and intolerable than Hunger and Thirst, or the want of Meat and Drink, which sometimes happeneth to Ships by adverse Fortune: For*

when they are overcome by the hand of an Enemy, they are wont indeed to suffer the loss of their Goods, but the Lives of the men are for the most part saved; which loss of Goods they may again easily repair by Merchandizing; and although they should be adjudged to death, yet their pain would quickly have an end. But if through an ill fate of necessity one be destitute of Bread and Water, and be forced to tear another in pieces to eat, that is of all the highest misfortune, and death it self were more desirable, than to sustain extremities and miseries of this sort. And although the want of Food doth not so frequently happen, yet the want of Water often falls out, whence Seamen are grievously tormented with Thirst, to whom, as in a most urgent Calamity, Mercy and Christian Compassion ought to be administred; but, Who can carry them succour afar off, and in a tempestuous Sea? And seeing that the Prosperity of Maritime *Countries (where for the most part there is no Wine, no Fruits, no Mines, as in the upper* Germany*, and other places) consisteth only in Navigation, it were very well worth the while that this should be promoted to the utmost. I have therefore diligently considered the matter with my self, and have found that a Remedy may be applied to this Evil,* viz. *the want of Meat and Drink, by providing in time an* Apparatus*, or certain matter to be carried in Ships, which is of far greater efficacy in mitigating* Hunger *and* Thirst*, than common Bread and Water; yea, is able to prevent and expel that Disease which is so familiar to Seamen, to wit, the* Scurvy*, which is often a great hindrance to Sailing: So that this matter may be carried together with the usual Provisions, as a Preservative, and in case of necessity, as if the Ship be overmuch harass'd with Storms, or be hindred by other infelicities, or detained longer in the Voyage than expected, it may be taken and used. It were indeed to be wished, that these materials might never be wanted in*

any Ships, but as the old Proverb hath it, A superfluous Caution never doth hurt*; therefore it is alwaies better to have a thing in readiness, which we do not use, than to want it when its use is necessary. But what those materials are, of which I speak, and how they are to be used when need is, I shall communicate to my Neighbour, for the publick Good, not at all doubting, but that this invention will prove highly profitable to many who use the Seas.*

The Reader now understands what hath moved me to write this Treatise, viz. *the love of my Neighbour, and that I have not composed it only for the sake of some few, but that I have emitted it to the publick, to the end, that those highly profitable Inventions might afford help and comfort to all Mankind, and especially to all that use the Seas, and such who are infirm in their health: Nor do I doubt but that this my sincerity of mind will be a great preservative, comfort, and relief to those who pass the Seas, when they are in danger, by the benefit of which, they may escape various Chances and many Misfortunes, or beware of them for the future: For by this means which I shall here produce against Hunger and Thirst, or other Diseases which are wont to afflict Sailors, it will be found, that what I ascribe to them may be fully deduced to the desired effect. And therefore many Thousands of men may thence receive Fruit and Profit, as long as the World shall endure; so that all who travel the Ocean, and are afflicted with any Disease, ought to rejoice, and give Thanks to God.*

Now, if any one should yet doubt of the success of this matter, (which nevertheless is shewed from so clear and irrefragable Fundamentals) I leave him to his freedom, whether he will put the matter into examination, and certifie himself of the Truth, before he give credit to it: Which also may be proved in a small quantity, and not

only on the Seas in Voyages, but on the Land also in the House, among both the Sound and the Sick. Therefore let no man vilifie what he doth not understand, but let him commit the thing to trial, and see its reason and quality, before he contemneth it, or pass an immature Judgment, lest his curiosity or imaginary Wisdom from a vain instinct, deceive him, or confound him with shame, when the proof shall shew it to be better than he could perswade himself.

But that in some places I have used obscure words, and have not proposed all things so clearly, as that every man will be able to understand them, let no man wonder at this for I have certain reasons for so doing; for no man will have any prejudice or injury thereby, seeing that nevertheless there are such points of this sort elucidated, which will remain after me safe and sound: Therefore whatsoever the Reader shall here find written, let him esteem it worthy to be received and embraced, as the Gift of God; the which, if I find to be gratefully accepted, more (God willing) shall follow. Also to all those who shall have need, I offer the Medicaments aforesaid, profitable against Hunger and Thirst, and all Sea-faring Diseases, a good quantity of which I will cause to be prepared, that every man may use them that will, and thence satisfie his desire.

Wherefore it is the interest of any to whom I have committed the Preparation of this Medicine, to betake himself to it, and when need shall be, he will not be unwilling to use it. I have not sought my self in these things, being content to serve my Neighbour out of Christian Charity. And although this my good Will shall not be accepted by foolish and ungrateful men, nevertheless God shall have the praise, who hath committed to us a mutual participation of love and good will, which also in his own time will grant the benefit of

this to be derived and redound to my Children after me, by some pious Souls, of which I make no doubt, and therefore readily acquiesce in my present condition.

THE Consolation of Navigators, &c.

Now to come to the Work it self, we will point out the Remedies, whose use is so necessarily required in Navigation, and which is able to preserve us not only from the pressures of Hunger and Thirst, but also from the injury of Diseases; and they are no other than Corn and Water concentrated, or reduced into a more compact and narrow compass, the one for the extinguishing of Hunger, the other of Thirst; and how they are both to be concentrated, and administred in case of necessity, I will exactly describe and teach. And,

I. *Of the Concentration of Corn or Grain.*

As for this, it is sufficiently explained in the *First Part of the Prosperity of* Germany; so that it might be here passed over; nevertheless I will make this short repetition.

Make a Malt of Wheat, Barley, Oats, or any other Grain, as is usual for the brewing of Beer, [*See the full Description*, *Prosp.* Germ. *p.* 1. *cap.* 2.] and extract all the strength with Water, as if Beer were to be made thereof: Afterwards boil this Liquor away gently in broad and shallow Vessels or Coppers, to the consistency of Honey: The Dreggs or Grains serve for Food for Cattel, but the inspissated liquor or juice may be commodiously carried by Sea, and at pleasure may be made into Beer with a mixture of

Hops and Water. And because for the most part eight Tuns of Grain afford one Tun of the inspissated Juice, every Tun of Grain maketh a Tun and an half, yea, two Tuns of Beer, for every Tun of Liquor maketh at the least eight, ten, twelve, or more Tuns of Beer, according as you will have it stronger or smaller. Therefore it is easier and cheaper to carry in a ship one Tun of this Juice, than ten or twelve Hogsheads of Beer, which easily corrupts and grows sowre; but on the contrary, this Liquor being kept from the Air, retaineth its goodness; and this is of singular advantage, seeing that good fresh Beer may be made of this juice. To this also belongs another great Commodity, *viz.* that if this Juice be mixed instead of Water, with Wheat flower, and baked, it makes an efficacious Bread, which affordeth far more nourishment to sailers than their common Bread, and containeth in it self so great power, that it can refresh and cheer the Sick: For which reason our Ancestors did not in vain use to temper fine Flower with clarified Honey instead of Water, and make Bread thereof, which they called Cakes of Life, because they were a great support to the Humane Body, and as it were excited the Life it self: But in our daies all things being subservient to *Avarice*, you may see those sweet Cakes, made up with common, impure, and unclarified Honey, which cannot generate much good blood, or juices; but this our Bread will approve it self to be of a greater sweetness, nobility, and efficacy, inasmuch as the elicited juice of Grain, affordeth a far better nourishment than Honey. But if any desire to proceed farther with it, this concentrated Liquor of Corn will yet afford a greater utility, *viz.* if being inspissated or brought to a thick consistency, it be mingled with fine Flower of the best Mault, and

Bread made thereof, which after it is baked, is to be cut into pieces, and again put into the Oven, till it be dry and hard, and then put up into Chests or Hogsheads, to preserve it from the Air, and so carried to Sea; for then this Bread, when necessity requires, may be infused in warm Water with a few Hops, and excited to the separation of its fæces, and it will acquire the substance of Beer: But that which doth not pass into the Liquor, nor become Beer, may be heat in a Kettle, and some Butter put to it, which will very much comfort the languishing stomachs of Seamen, as well, or better than the eating of Bread softened in Beer. But in regard that bitter Potions are not agreeable to all Palates, it may also be made into Beer without Hops, by mixing the bread with good water only, and afterwards boiling it for the evaporating the more phlegmatick part, which will have a pleasant taste. But this Bisket also, or twice baked Bread, may be ground small in a Mill, and put up close in Casks, and preserved on shipboard. Afterwards, when need shall require, you may temper it with warm water, and in an open Hogshead (which yet must have a bottom) suffer it to settle, and clear it self; so the flower ascendeth upwards, and the water attracteth the sweet liquor, and hence becometh excellent and wholsom Beer, which if it be drawn out at the bottom of the Hogshead runneth as clear, as if it had been made some Months; for there is now a separation made of the pure part of the Bread, from the impure or gross, and when that which is fine is drawn off, the gross part may also be drawn out of the Vessel, which being boiled with butter, affords a singular pleasantness to the taste; yea, also is of a greater salubrity, and better digestion in the stomach, than Pease, Beans, or French Barley boiled: So that here is

nothing lost, Bread or Meal of this sort affording good Beer, and also a wholsom Food to eat. And thus on shipboard one may at any time of the year not only have good fresh Beer, but also thence may be made good Vinegar. And this may suffice to have briefly taught the manner of mitigating Hunger and Thirst by concentrated Corn.

I shall now treat of the Cure of Diseases, to which Seamen are liable, and which often bring death.

Now, if you regard the Nature of Man, you shall generally find, that he useth no measure or mediocrity in eating and drinking, but rather puts down so much till his belly will hold no more. Which Vice one man obtrudeth upon another, under the shew of kindness and good-will, from an old custom and enormous abuse, although in this one offends more than another. Therefore while the Appetite is more liberally indulged, than admitteth of a good digestion, the Liver assumeth a Chyle which is scarce half concocted: Whence also a gross blood is generated; and so in process of time the Viscera are filled and obstructed with crass and viscous humours; hence they cannot perform their office as they ought, but rather many and divers Diseases do arise, according as the heap of crudities encompass the Flesh covering the Joints, obstruct the Veins and Nerves, and deprave all the *mediums* of nourishment; therefore when the Evil cometh to that pass, and grows prevalent, the whole body is sensible of it, but chiefly in that place where it fixeth its seat: And hence necessarily one part suffereth by the hurt of another, till at length all the powers go to decay, and the whole body languisheth, and cannot help it self, and unless succoured by Art, dyeth.

For these causes Physick was invented, that those

Diseases arising from intemperate eating and drinking, might be met in the way, the perverse Enemy or primogenial Vice of the body be removed, the viscous and phlegmatick *Saburra* of the depraved humours dissolved and opened, and the oppressed Members expurged, that so the body may again recover its former healthful estate; the which is wont to be done by divers means, and in various manners, according as the Physician understandeth the Disease to be, so he also affords his help, *viz.* taking it away by Evacuations upwards or downwards, by Sweat or Urine, or by other means, as the nature of the Disease requireth. But by which way soever the recrements of the malignity be dissipated and expelled, and the inward parts be freed from them, it is well, and the Physician hath performed his Office, also meriteth Thanks and a due Reward. Therefore whosoever well understandeth the nature, rise, and birth of diseases, and also possesseth a good Medicine, or can obtain one, is fitly qualified for a Physician; but he who knoweth not the disease, nor is also furnished with fit and efficacious Medicines, nor knoweth how to obtain them, grievously erreth by trying Experiments so long, till the Evil more and more encreasing, the Sick at length expires; the which is so well known that it needeth no proof; so that many who have contracted diseases from immoderate eating and drinking, are afraid to commit themselves to an unskilful Physician, but chuse rather to cure themselves by abstinence and fasting, which way is indeed safe, although it be tedious and full of delay.

Others again use vulgar and trifling Medicines, and yet recover their health, tho' late, thinking that this happened by the use of their Medicine, when nevertheless the length of time, and the sparingness

of their meat and drink, during their illness, whence the superfluous pravity of humours hath gradually wasted, hath effected this; which also sometimes happens to those who take no Physick; but by how much the greater the pravity of the humours is, by so much the longer it will be before Nature will be able without help to overcome and expel them. The which, if it take 4, 5, or 6 weeks to accomplish, a Physician (by the benefit of good Medicines) might effect it in 2 or 3 days. So great is the difference between a Cure which Nature performeth in a long time, and that which is quickly done by Art.

But here it may be objected, that all diseases take not their beginning so much from an evil and superfluous humidity, as from manifold other causes, one being derived from this, another from another cause. To this I answer, that all those affects of the Body which exist in the skin, and do not proceed from external accidents, as wounds, bruises, falls, *&c.* whence the bruising of the body, and also Death, at length happens, do draw their original from the intemperance of eating and drinking, which administer occasion, and furnish matter to noxious humours, which hence occupy and infect divers Members; for one part affecteth another, till the whole body abounds, and is imbued with a multitude of viscous humours. When the Stomach is over-gorged, and its tone is spoiled, it contracteth cold crudities, and falls into a dangerous estate, How then should it rightly digest the Food? and, What good can it transmit to the Liver? And seeing the Liver receiveth nothing but what is evil and depraved, What can that procreate of good, and diffuse throughout the whole body? Therefore as I have said, one Member must suffer by another, till the errour become common. Whilst a Tree or an Herb in the

ground remains temperate, that it be neither too wet nor too dry, its root draweth from the earth virtue, and imparteth it to the trunk, and the trunk to the branches, leaves, flowers, and fruit, and is able to produce fruit conducible to health, for many years. But if the root be ill placed, the Salt being ill disposed, whatsoever the stock there finds, it associates to it self, and also comnmunicateth the same, and no better to the branches: And if it stand too wet, it brings forth an insalubrious Fruit, which by reason of too much moisture, falleth off before it is ripe, in whose stead fungous protuberances arising from putrefaction, spring up, and such Plants do not endure long.

Again, if the Root stand too dry, it cannot thence have juice sufficient to nourish the Tree, and bring forth Fruit, but will by degrees wither away and die. So also it is with Men, and their Diseases; for according as their Bodies are treated, they are healthful and fruitful, or else diseasie. Now seeing that I have proved Diseases from redundancy or humidity, or from driness, it will be easie to provide preventive Remedies against them; or if any errour or delay should happen in this, it may be amended in the curative part, by which the Evil may be abolished. These are required to be of that nature and property, that they attract the superfluous and pernicious humours from all the Viscera and principal Internal Members of the whole Body, into the Ventricle, conciliate a new concoction or digestion, separate the pure from the impure, adjoin the one to the Liver, and eject the other by Seige: And so the body is not only freed from depraved burthensom humours, but also recovereth its strength, and is cured of all Infirmities. Which manner of Curing, at this day, the more the pity, is

known but to few; seeing that it is not to be effected with common Herbs, but somewhat better is required, than what the Philosophy of old Women prescribeth: Nevertheless there is a great efficacy in certain Simples; as may be seen in *Hellebore* or *Helleboraster*, by whose benefit the Ancients prolonged their lives, by the daily use of a certain dose of it. Moreover, Tabaco where it cometh to maturity, effecteth things to be admired, being rightly prepared and administred; yea, even that which (being crude) is taken in Pipes, cooleth and refresheth the body, and also in some measure relieves against Hunger and Thirst; which common experience daily witnesseth. But whence this Virtue happens, Tabaco-takers neither know nor care, but acquiesce, in that they either receive pleasure or profit by it: Therefore, if Tabaco, or any other vulgar Plant can perform so many and so great things, being yet crude, without any preparation, What would not an Extract or concentrated Essence of all the Vegetables do, being rightly made? which nevertheless ought to be of that nature, that it may not only dispel every heap of malignant humours, but also strengthen the inward parts, and preserve from all things which may happen in the generating of a Disease.

Such a Medicine is that which I here present to all those who continually use the Seas, and besides the Scurvy, undergo many other Diseases; by which they may not only efficaciously protect themselves against the assaults of Distempers, and hinder their progress when already began, but also under the present want of Meat and Drink, may make sound an infirm body: But how, and from what Ingredients this Euporist may be made and prepared, needs not to be manifested to every one. This is a great Gift of God,

which ought to be honoured, and not prostituted to the Unworthy. Let it suffice at this time, that such a Medicament may be obtained at a small price; I will not suffer it to be buried with me, but will leave it to others, who may keep it, and sell it to those who desire it at a reasonable rate.

This is given in form of an Electuary, and may be taken for a Preservative, daily, or every second, third, or fourth day, as occasion requireth, in the quantity of half or a whole Pease, upon an empty stomach, fasting two hours after it, if need be, but if not, Food may be taken presently after it, although it is better to abstain some hours: But when a Disease hath already invaded a man, whether it be *Fever*, *Scurvy*, *Headach*, *Catarrh*, or any other Disease infesting Seamen, let the Patient forthwith swallow down of this Electuary the magnitude of an ordinary Pease (for it hath no unpleasant taste) and sweat if he can; if not, let him keep however a very moderate Dyet all the day, and in Summer time, as much as he can, avoid the intense heat, and in Winter, the extremity of Cold; the next day let him take the quantity of a Pease or two, and so let him encrease or diminish the dose, according to the state of the Disease. These things being well observed, all Sicknesses will give place.

If a man carry with him but half an ounce of this Medicine to sea, in a long Voyage, he will possess a *Panacea*, both for the preventing and curing all Diseases incident to his body.

This is of very great use and profit especially for Masters of Ships, to whom I also highly recommend it as such, and not to them only, but also to all the Inhabitants of the Earth, to whom it promiseth no less success. If a Medicine can be invented, (besides

that universal one of the Philosophers) accommodated to all diseases, truly this is one, and will perform all, or even more than I have attributed to my *Catholicon* in the *Second Part of my Pharmac. Spagyr.* that is a Powder, but this, of which I now discourse, an Electuary prepared of certain good Ingredients and Sugar. I affirm again, That there is no disease, whether internal or external, for the curing of which this Medicine doth not suffice; for it doth not only resist the *Fever*, *Scurvy*, and *Pox*, but even the *Gout* and *Leprosy* it self, provided they be not too much fixed and radicated; yea, although they be very inveterate, and cannot be throughly rooted out by this Medicine, nevertheless it gives relief in them, and renders them more tolerable, and hinders the accession of the daily fits, and keeps it under. Certainly where this Medicine can yield no help, Nature must be wholly ruined and tired out. What I have here written, is the Truth, which I am able to prove by experience; however it is free for every one to believe or not believe me, as he pleaseth: Christian Charity to my Neighbour hath compelled me, if it be well taken, it is well, if not, I have done my part, and discharged my Conscience. Nor will I insist any farther on the praise of this *Panacea*, I have said enough to those who believe, or can understand me.

And thus I have set before the whole World, that Medicament which can preserve from, and cure the most grievous Diseases accompanying Ships and Voyages, and also relieve in the extremity of Hunger.

This being done, there yet remains another Remedy whereby the Body may be relieved, and refreshed in extremity of Thirst, when drink is wanting; and this is done by Water concentrated, which is of so great virtue, that it giveth such a

refrigeration to a thirsty Palate, that in the whole World there is not the like. Seeing therefore that in long Voyages Water is often wanting, and putrefieth and stinketh, it will be very necessary here to declare and shew, how Thirst may be restrained and rendered tolerable in time of necessity. Then also how common Water may be preserved from corruption; moreover, that one Tun may effect as much for the quenching of Thirst, as otherwise 2 or 3 Tuns of common Water can. Which is not only my saying, but the Truth it self; as I will here prove by manifest testimonies: And this is to be done as I have said, by Water concentrated and coagulated. But what that is, I will first shew, and then by what means it is to be prepared and used.

To explain the genuine Property of concentrated Water to many, may seem unnecessary, in regard that Seamen are not skilled in such discourses, nor careful about them; and that they rather belong to Philosophers, and the Contemplators of Nature, that they may render the knowledge of them familiar to themselves: But this Treatise without doubt will come into the hands of wise and experienced men, as well as into those who use the Seas, and therefore perhaps I shall not lose my labour, if I somewhat more exactly describe the nature of that water.

It is sufficiently evident to all those who have saluted but the Thresholds of Nature, that the Omnipotent God, in the first Creation of the World, hath separated the Elements from the rude *Chaos*, as also the Elements from one another, placing the Earth in the bottom or foundation of the Center, and over that the Water, over the Water the Air, and over the Air the Fire; so that every of them holdeth its own receptacle and seat, from whence, without the

will of God, it cannot recede. Nevertheless, we find that one alwaies participates of the other, and none is found without another, although one be predominant and visible; but the rest exist in it invisibly, and by the skill of an Artist, may visibly be deduced from it. So from the Earth we elicite Air, Water, and Fire; from the visible Water, natural Earth, Air, and Fire; again, from the Air, Earth, Water, and Fire; and from the Fire, Air, Water, and Earth. Hence the Elements are continually circulated from one species into another, which indeed we do not observe or perceive, and no Element can want an Element, but draweth its life and nutriment from another. The Fire cannot burn without Air; the Fire operateth upon the Water, and of it maketh Air; the Water resteth in the Earth, and moisteneth the same; the Fire impregnateth the Air; the Air insinuateth the Seed into the Earth; the Earth nourisheth and cherisheth the Seed unto perfection, and afterwards bringeth to light what it hath conceived, and carried in its belly.

These things are only hinted at by the way, and not without cause.

But to return to our concentrated water, that we may explain its nature, know, that water is the *principium* or beginning of all the Elements; which thing is sufficiently manifest, and may be seen daily, especially in the *subterranean* Mines of Metals, whose inward bowels are so penetrated, that there is not only water, but we also see it to be quickly transmuted into various forms of Mineral Bodies, the which without is familiar; and the more limpid or clear the water is, the brighter Stones and purer Minerals it generateth: Of which you may read more in that Treatise, [*The Second Part of the Mineral*

Work] where I have described the generation of Minerals; also that Flints and Sand, in the Earth, Rivers, and Seas, receive their encrease from water, is sufficiently manifest; for all sand was primitively water only, and hath passed out of water into hard sand or stones, and into which it may again be changed. But this is not to be used as a Remedy against Thirst, because it is now too hard, and difficultly returneth to its first matter, *viz.* Water, except by the benefit of another subject, which is a *medium* between Sand, Flints, Crystal, and common water, *viz.* Salt, which hath an agreement with the nature both of common water and that of stones, and may be easily changed into either of them; as you shall hereafter hear. But this concentrated water, which I here propose for the vanquishing of Thirst, and refreshing of the body, is salt prepared and concentrated, either of the waters of Mountains, or of the Sea, which are of the same goodness: Of which afterwards is prepared by Art a water so excellent, that for repressing of Thirst and refreshing a languid body, there is no Remedy in the world may be compared to it.

Here some one ignorant of natural things may object, and say, How can it be that Salt should repel Thirst, seeing that when it is eaten, it exciteth and encreaseth the same? To this I answer, That common salt, as it is first extracted or boiled, can in no wise restrain the Appetite of drinking, but rather provoke it, except its pravity be first corrected and depurated; for every salt seems to have laid aside its nature and property, so long as it contains earthy and gross fæces, which nevertheless may be removed from it by solution, filtration, and coagulation; whence also it is bitter, astringent, and hard; but this harshness and terrestreity being removed, the salt remaineth no

longer hard, but is reduced into a soft and fluid Liquor, not sweet, but pleasantly acid, tasting like an Apple or the stones of Grapes. And this purification must be made by the force of Fire, *viz.* when the salt in destilling is sublimed in earthen Vessels, by strong Flames; and then the purest and most noble part only ascendeth, and the more gross and earthy remaineth in the bottom, and is of no use; but the purer part is of great power and virtues, not only against Thirst, but is also very necessary for many other things, as shall hereafter be demonstrated. That otherwise in impure common salt a great Virtue is latent, let no man doubt, seeing that it may be daily observed: Wherefore that excellent Philosopher *Plato* writeth, *That in salt there is somewhat divine*; and according to the opinion of other great and wise men, GOD hath openly manifested Himself in Fire and Salt, and the ancient Philosophers were hence taught to prepare their *Universal Medicine*; which Art of preparing they have called *Alchymy*, or *The melting of Salt*; but I speak not this by experience, in regard that I never yet durst attempt so great a Secret, being contented with smaller things; but this I know, and have divers times done, *viz.* that by a certain Artifice, I have precipitated from common Salt some corporeal Gold, although without profit, and only to see the possibility, which without those precipitations remaineth spiritual, and at length by them obtaineth a corporeal substance.

Indeed the greatest Mystery of the whole World consisteth in Fire and Salt, and with those two (after God) nothing may be compared; for the Flame raiseth Light out of Darkness, which otherwise none but God can do. It is also fit to restore life to the dead, no otherwise than the warm Sun or Oven reviveth Worms, Frogs, Serpents, Flies, and other

Insects, which have been killed by the Cold; of which I have made mention in the second part of my *Pharmacop. Spagyr.* as also in *Miraculum Mundi*, and its *Explication*. Many men use Fire, yet know not what they have or use: So also it happeneth with salt, all men use it out of custom, but observe not what they taste. Salt is a thing of great moment; by it we give strength to resist Corruption, both to the living and the dead.

And so it is, that if men had not salt, or at the least those Plants and Fruits, in which it dwells, they would putrefie while yet living. Which would also happen to Cattel, if they did not eat Grass, which contains in it self its own salt, and sufficeth them in feeding; nevertheless if something better were given them with it, it would be very profitable for them; for if to horned Beasts, as also Hogs, some saltness were given with their meat and drink, they would thereby acquire much strength and fatness.

Seeing therefore that Salt, whilst it is yet gross and rude, and defiled with many impurities, performeth such things in living Creatures, and preserveth Flesh and Fish, as also all Herbs and Grass, long from Corruption; What could not such a salt do, which by the help of Art hath received a greater purity than Nature hath bestowed upon it? For the Fire containeth a power of correcting and purifying salt, and converting it into a finer and better substance. The common salts which we daily use, do indeed give a relish to all Edibles, and preserve them from putrefaction; yet nevertheless they dry, astringe, and bind the belly; also excite Thirst; but salt being rectified and depurated, communicateth a sweet and grateful taste, also more powerfully resisteth Corruption than the other, neither doth it bind the

belly, but keepeth it soluble, expelleth Urine; nor doth it cause Thirst, but rather taketh it away both from the sick and sound: So great a difference is there between the common and corrected and depurated salt, which Rusticks little understand. The nature and property of common salt is known to every one, as far as concerns the Kitchin, but the rectified is known to few: And the Spirit of Salt, which is in use in Apothecaries shops, and which they also sell, being for the most part not rightly prepared, effecteth little, and therefore not frequently used: But if it were made and rectified as it should be, it would not only have a pleasanter taste, but also a better operation. So many things bear Names which are not agreeable to the thing, and therefore cannot perform what is expected from them.

The Ancients have ascribed great Virtues to Spirit of Salt in Medicine, which it indeed hath, if after its destillation it be well rectified and dephlegmed; but if it be administred so crude as it ascends the first time, it may perhaps do more harm than good, inasmuch as a great deal of terrestreity comes over with it, which in the rectifying remaineth in the bottom of the Glass, as an insipid, bitter, or astringent salt. And although this be well enough known to some, nevertheless they abhor to rectifie their spirit, because the spirit in rectification loseth a great part of its weight, by separating its superfluities.

I taught, many years since, how to prepare the spirit of salt in quantity, whose description is also exactly set down in the *first and second part of my Furnaces*. It also demonstrateth its utility in Metallicks; as manifestly appears in the *first part of*

my Mineral Work, where the manner of extracting Gold from Stones, by its help, is taught. Altho' the spirit for that work should be prepared after another manner, than that which is to be used at Sea, or on shore, for the curing Diseases or repressing of Thirst; wherefore I'll first teach the way of making this, and then also shew its Use.

As for the manner of anatomising Salt by Fire and Art, and transmuting it into a pure and sweet spirit, it is various, for one useth this, another way, as I also have taught divers waies, in the *first and second part of my Furnaces*; but here I will appoint another, which is the best and most commodious for the uses treated of in this Book, and is thus to be performed.

Get some strong Retorts, made of good Earth (but Glass is better) fill them with the following mixture of Salt and Earth, then according to Art, destil thence a spirit gratefully acid, which duly rectifie, and it will be prepared for Use. The salt is to be thus prepared for destillation: fill a great Crucible with Sea-salt, which cover with an earthen Cover, and by degrees put Fire about it of flaming Coals, encreasing it, until the salt be all over red-hot; this being done, presently remove it from the fire, and let it cool; by this means, if any greasie sordes, or other combustible impurities, adhere to the salt, they will be consumed and vanish. Dissolve the salt in common water, filter or strain it through a fine close Linen Cloth, that the fæces may be separated; the clear Liquor evaporate in an earthen glazed Vessel, till the Cuticula appear, then make little balls of clay and sand, about the bigness of Walnuts or Pigeons Eggs; dry them, and heat them red-hot in an earthen Vessel, and so the fat spirit of the Earth will be burnt away; then imbibe those balls with your strong salt

water, by letting them remain in it for some hours, that they may drink in as much of it as they can, then take them out, and dry them: With these fill your Retorts, and administer Fire by degrees, and at length urge with the strongest flames, so long, till they emit no more fume, for then all the spirit is come forth: The Receiver must be of Glass, and very large, in whose bottom must also be a little water, to attract and condense the spirit. The Destillation being finished, the spirit is to be rectified by it self in a low Cucurbit in sand, and first the water or phlegm will come over, (which you may keep for another destillation) then the pure and sweet spirit will rise limpid and clear, and an unpleasant salt will remain in the bottom, which is to be cast away, and the spirit to be kept for the uses to be shewed hereafter.

But if you desire to have the spirit yet more pure, and efficacious, you may rectifie it again upon calcined or powdered Flints, which will retain in the bottom whatsoever is yet gross or impure, and the spirit will be rendered very pure and subtile; for the Flint at the first was Water and Salt, and hence both contain in themselves so streight a communion. This may be seen among the Glass-makers, who reduce Sand or Flints into clearness by melting, that thence they may make pure Glass; for Salt in the Fire dissolveth sand, Flint, Crystal, and together with them receiveth the Essence of Glass; yea, and these very species and matters, by the help of an *Alkaly* Salt, are resolved into a diaphanous Glass, which being put into common Water, melt like salt; of which I have discoursed in the *Third Part of my Furnaces*. When we destil the aforesaid rectified Spirit of Salt again from powdered Flints, from the innate love which it hath to the Flints, it carrieth some part of them upwards with it self, and is made

better for use in all Diseases, especially in the *Dropsie*, *Stone*, and *Gout* it is an excellent Medicine. The Flints remaining in the bottom, yield a water which dissolveth the hardest Crystals, and is acid like the spirit of Salt, and nothing else but part of it coagulated with them, and may be administred in all cases as the Spirit of Salt.

Let no man wonder that I ascribe more to this Spirit rectified with Flints, than to any other common spirit of salt; for few know what Virtues are latent in flints or sand. All Birds and four-footed Animals use sand. Many men administer the powder of Flints and Crystal, for the corroborating of weak stomachs. Hens devour Sand and small Pebbles, that they may thence have matter for their Eggshels, and being debarred of it, lay Eggs without shells. Wherefore I affirm, That this spirit of Salt, abstracted from flints, to be better in many Diseases than the common spirit, and especially the Crystals, or spirit of salt coagulated, of which we have above made mention.

Let this Suffice concerning the Preparation of spirit of salt. Now we will also teach, how it is to be administred either at Sea or on Shore, for the repelling of Thirst, and the Cure of Diseases: To what other purposes the spirit of salt serves, besides Medicine, I have shewed elsewhere; here my intention is only to signifie of what great use and profit it may be in Voyages to Sea, which was the only occasion of writing this Treatise.

Of the Use of Spirit of Salt *in Ships, against Thirst, and also the Scurvy.*

In the first place, this spirit is profitable to the body,

when a small quantity of it is put into the Hogsheads of Water, thereof Seamen and Souldiers drink, to which it gives a grateful acidity, like that of Wine, and is far more effectual in quenching of Thirst, and in less quantity than other Water, and besides preserves the Water from corruption and stinking, which otherwise in long Voyages it is wont to suffer, contracting a muddiness, blackness, and breeding Worms, which generate the *Scurvy*; for the Water containing the spirit of salt, cannot corrupt; which spirit also preserveth other things, both living and dead, from putrefaction. And because the water with the acid spirit of salt extinguisheth Thirst more than any other, it necessarily follows, that so great a quantity of water need not be carried for a Voyage, as otherwise is usual. Moreover, seeing that the spirit of salt resisteth all putrefaction, it suffereth not the *Scurvy* to take root, for it refresheth and exhilarateth a man with great vigour, corroborateth the stomach, and all the members of the body, it consumeth pituitous matter in the Reins and Bladder, expelleth Urine and Stone, keepeth the Belly soluble, promoteth digestion; it suffereth no Disease to grow from corruption of the Blood, to which otherwise Sea-faring men are subject: Moreover, it exerteth its salutiferous Virtues, if a little of it be mingled with Wine and Beer, in Ships, which will long preserve it in its goodness and sincerity, causing it the better to repress Thirst, and therefore to go the farther in use. Also Beef, Mutton, and Veal may by it be preserved a long time, *viz.* if they be put into stone pots, and powdered or condited with some salt, dissolved in the spirit of salt. Nevertheless it behoveth that the Flesh be without many Bones, and that all the legs, shins, or shanks be cut off. Moreover, a very small quantity of the spirit being added to the water in

which Fish is to be boiled, maketh the Fish eat firm and close, and of a much solider relish than when sprinkled with Vinegar. So also Raisins being put into water impregnated with spirit of salt, will grow soft, and swell, and will recover their strength and sweetness, as if they were fresh plucked from the Vine, which will afford a great refreshment to those who frequent the Seas.

In a word, this spirit may commodiously be used, not only in Water, Wine, or Beer, but also in all sorts of Food in Ships; for it giveth a very pleasant taste to all meat and drink, and correcteth them so, that they become more wholsom. It hath also another very profitable use, *viz.* If in hot weather but one drop, or so small a part of the coagulated spirit, as the magnitude of an Hempseed, be mixed with sugar and held upon the Tongue; for it so cooleth the mouth, and allayeth Thirst, that there will be no need of bad Water or Beer, by which the body is more violated than corroborated, through drinking often and much of them. Nor is this the least of its virtues, that when in a long Voyage there is a want of water, a little more of the spirit of salt may be put into it than will serve for a grateful acidity; for so it will quench Thirst for a longer time, and in a less quantity than otherwise a greater quantity of water can do. Yea, although the Ship should be cast away, and the men forced to betake themselves to their Boat, or broken pieces of the Ship, as it often happens, if they have but an ounce of the spirit of salt in a Glass, or half so much of it coagulated, in defect of Drink, they may sustain their lives and health therewith so long, till it please God to afford them a means of *getting* to shore; nor will they be forced to drink their own Urine, or Sea-water, which is pernicious.

These and the like Virtues the spirit of salt sheweth in Ships, which for brevity sake, are not all declared.

I have also meditated how the *Sea-water* may be made sweet and drinkable by precipitation, which would be very desirable in want of water: And so far I have *attained*, that I can precipitate a good quantity of the salt from the water, which also becomes much sweeter, but yet not so fully, but some saltness remains in it. Although in case of necessity this water may be used in Ships for the boiling of Pease and Beans, as also for the fermenting of *concentrated Corn*. What I now know concerning this precipitation, I will make manifest for the good of my Neighbour, and shew a good beginning how Sea-water may be made fit to drink.

There is a certain kind of Mineral called *Mary's Ice*; it is not the *Muscovian* Glass, as perhaps some may think, but another thing; when it is heat red-hot in the fire, and so cast into Sea-water, it is presently reduced to a tender and white powder; which being done, the Water will be agitated and moved hither and thither; then the Powder attracteth to it self part of the Salt from the Water, and settleth to the bottom of the Vessel, and the Water groweth clear, which may be poured out, and if this labour be once or twice repeated, the Water, by this precipitation, will indeed be made sweeter, but not altogether potable. Also the salt or solution of *Saturn* dismisseth much of the salt from Sea-water, yet by that it is not rendered drinkable. The best way which I now know, is this which follows, but it is somewhat costly: Nevertheless when necessity urgeth, sweet and good water profiteth a man more than a Bond of an hundred pieces of Gold. Hence this Art deserveth to be honoured, although it be costly; for a man ready

to die with Thirst would give all he hath for a draught of Water to save his Life: Wherefore somewhat of this precipitation may be committed to Ships, for their preservation, which may be used in great necessity, but if no such be, it may be brought home again, and kept for another Voyage, seeing that it will in no wise decay, but be as good after an hundred years, as the first day of its preparation.

But what this is, there is no need openly to divulge, but he who desireth it, may come to me and have it: But for the information of those who are skilful in *Chymistry*, I will intimate this; That the precipitation of Salt from Water, is necessarily to be performed by a singular sand, which doth not only drive salt downwards, but also all Phlegm, Sordes, and Impurities; so that although the water should be like to a Fen or Dunghill in filth and stink, by the benefit of this precipitation, in a few hours, it should become like clear Fountain water, because the evil odour and taste would also be precipitated.

The same may be done in all Waters, how nasty and muddy soever, and not only in Waters, but also in all potable Liquors, as Wine and Beer, although the Wine were red, seeing that the precipitation casteth to the bottom all muddiness, colour, and stink. And hence not only those Liquors, which are changed red by corruption, or other accident, but also Crystals, which are red by nature, may be reduced to a perspicuous clarity; which is a thing very profitable for Vintners; for otherwise the Sea-waters become sweet when they are carried far through common sand, which imbibeth their salt; for those two have a mutual communion and communication, seeing that both are generated of Water; hence also, by the fire, they are resolved into

a dry Water, or pellucid Glass. Whence any man knowing in the nature of things, may apprehend, that this precipitation of Sea-water is built upon a foundation agreeable to Nature.

My *Alexipharmac*, or Mineral-Electuary, before mentioned, as also the Spirit and Crystals of Salt, may be administred, as well at Land as on Sea, against the *Scurvy*, *Fevers*, and other Diseases.

And although in the *Second Part of my* Pharmacop. I have already described a certain Mineral Remedy, under the Title of a *Panacea*, and commended it against all Diseases, by which admirable Cures are e'ry where done, yet I prefer my Mineral Electuary before that, because it is more accommodated to use, seeing that when need requires, it may be taken out of a Box with a Knife only; neither is there need of any Vehicle, as Wine, Beer, or others, which are necessary to be used with the *Panacea*; neither is there need of weighing it, but may be proportioned by the Eye, according to the age and strength of the sick. Those who are of full age and strength, may take as much of the Electuary upon a fasting stomach as will equal the magnitude of a Pease, and fast some hours after it, if time and opportunity permit; also let the Patient avoid the cold Air, and the heat of the Sun in hot seasons. It is to be taken twice, four times, or oftner, in a week, according to the necessity of the sick, to which it must also be proportioned by encreasing or diminishing the Dose; for if one grain should not work, the Patient may take two, ascending to 3 or 4, if need be. When a small Dose is administred, it works insensibly; if a little more, then it worketh by stool, and sometimes by vomit, when it findeth diseasie matter in the stomach; if it findeth depraved salt humours, it casteth them out by sweat,

spitting, or urine, and throughly purgeth the body from every evil. In brief, I say, it greatly purifieth the Blood, openeth all obstructions of the internal principal members, as the *Liver*, *Spleen*, and *Lungs*, beyond all *Phlegmagogues*: It hindereth the growth of all *Apostemations* both within and without the body; it consumeth *Fluxes* and *Catarrhs*, which fall upon the Eyes, Ears, and Teeth; it exterminateth the venereal *Pox* in a short time; it also cureth the *Dropsie*, *Leprosie*, *Gout*, and *Falling-sickness*, both in old and young; expelleth the *Stone* both of the *Kidneys* and *Bladder*; cureth all sorts of *Fevers*; and lastly, it healeth all inward and outward *Wounds* and *Ulcers*, being taken inwardly, and a due Diet observed.

This is a safe and approved Medicine in the cure of all curable diseases, nor doth it fail to help in inveterate affects, *viz.* when a disease hath been long growing, and is now firmly rooted and fixed, that it cannot be totally expelled, as the *Gout* and *Stone*, yet then this Medicine mitigateth the pain, and maketh the Fits slower and more tolerable, and suffereth not the *Disease* to encrease, but to be more and more abated and diminished. It cures all *Scabs* and *Ringworms*, or *Tetters*, proceeding from an impure Blood and Liver, only by taking it inwardly, without any outward unctions. What shall I say more? This Medicine cannot be sufficiently praised, seeing that it operateth universally against all the diseases both of Men and Beasts: But I must forbear, for if I should shew all its Virtues, this Treatise would swell to too great a bulk.

In *Maritime* Towns, and other places where the *Scurvy* is regnant, a better Medicine than this cannot be found, for it removeth all pravity of Humours, from which such diseases proceed; it preserveth from

the *Plague*, and other Contagions, and happily cureth their Infections; it strengtheneth the Memory, Heart, and Brain; preserveth from the *Palsie* and its Concomitants: In time it restoreth those who have their Members contracted, and their Nerves repressed and immovable, after the being anointed with Mercury, for the cure of the *Pox*. He that will take it every week or once in 3 or 4 weeks as a preservative, shall not have the *Tooth-ach*, nor shall his Ears be troubled with ringing or other noises, nor shall his Eyes be troubled with sharp Rheums; but by the benefit of this, those continual inveterate Corroders of the Body, *Catarrh*, *Fistula*, *Cancer*, and other almost incurable symptoms, are throughly cured.

Hence both Rich and Poor, and those especially who go long Voyages to Sea, and want Physicians, ought to esteem this *Alexipharmac*, and provide themselves with it against a time of necessity. If any man carries with him half an ounce of it, it will be sufficient for preservation and curation for more than a year, in many diseases. If a Ship going to the *East* or *West Indies*, carry with them half a pound of it, they may save the Lives of many men; one of which is of ten times more value than the price of the Medicine, by help of which the lives and health of many Hundreds of Men may be preserved, and being sick, may be reduced to their former health.

Now it is farther necessary to describe the Virtues which the Spirit of Salt sheweth on Shore; for that which is profitable to the sick on shipboard, is not hurtful for those who dwell at Land: For this spirit may be used in all Houses in their usual drink, as Beer or Wine, especially in these moist Regions, where the Scurvy commonly reigneth; so that there is

scarcely an House to be found, in which there is not one at the least infected with this Disease; for the drink is hereby made clear, so that it well dilateth the Urinary passages, moreover hindereth the growing of the stone in the Kidnys and Bladder; it also gives a pleasant taste to the Wine, removeth its superfluous Tartar and precipitateth it to the bottom, so that *Spanish* and *French* Wine acquire a clearness like to *Rhenish* wine. In Summer time, after Liquors have once wrought, it suffereth them not to fret, grow mucous, or work again, but keepeth them from many Accidents. *French* Wines, as sold in many places, have neither odour nor taste, but good Wine is endowed both with a Vinous relish, and a grateful odour; and when these are wanting, the name agrees not with the thing. But the Spirit of Salt, with the Essence of Wine, conciliates to *French* wine the smell, taste, and colour of *Rhenish* wine. Hence also being so meliorated, it will, like *Rhenish*, keep many years, which otherwise will hardly hold good two years. Moreover, by the spirit of salt that quality may be taken away from Honey, which renders its taste somewhat ungrateful, and its hidden Impurities may be precipitated, so that an excellent wholsom drink may be made of it. Which is a famous Art to be used in those places where there is no wine; for when Honey is well depurated, and the unpleasant taste taken from it, it becomes as a comforting Balsam to Man; as that old Souldier had experienced, whom *Alexander* asked what he had used to prolong his Life to so great an Age, he answered, That inwardly he had used Honey, and outwardly Oil. And it is evident to many, that there is a great virtue in Honey, but by reason of the unpleasant taste, it is loathed; which yet is removed by the spirit of salt, so that a drink prepared of such pure Honey, is as wholsom as the

best wine: which hath also this benefit, that every Housekeeper may have this drink at his Table, at any time of the year. This honied Nectar also holdeth good many years, after the manner of the best *Rhenish* wine, and is made for a small charge, and will be a great comfort to those who are not able to go to the price of wine. Moreover, every one may make his own drink as strong and as sweet as he pleaseth; which is the principal head of the Art, to take away the ungrateful taste from the Honey, which being removed by the spirit of salt, the drink will become clear, to which you may add a little *French* or *Rhenish* wine for taste sake. You may thence also make good Beer, which will hold its goodness 10 or 20 years, or more, *viz.* if instead of common water you take the water of Hops, to dissolve the purified Honey, to which (if you please) you may give divers tasts, by putting into it divers Herbs, as is wont to be done in wine and beer. But this you are especially to regard, That for this business you do not use unrectified spirit of salt, for such would spoil the taste, and corrupt the drink, but alwaies take that which is well rectify'd, which I have sufficiently taught the manner of doing of, both in this Treatise, and divers other places of my Writings.

NB. There is no need to put the spirit into a Vessel of Wine or Beer, but it sufficeth to keep it in a small glass, and as often as you have occasion to put some drops of it into a Bottle of Wine or Beer, and so to drink of it. Every one therefore may make his drink as he will, by putting in more or less of the spirit, according to his Palate; which doth not only serve to make the wine and beer clear and diuretick, but may also be used in Fountain-water, in hot weather, for the allaying of wine: For if some drops of it be put

into a bottle of water, it giveth it a grateful acidity, not much unlike to the natural Mineral acid waters, and in hot weather allayeth the over-great heat of the Blood, and quencheth Thirst, so that there is no need of burdening the stomach with much wine or beer. Also all those drinks, as wine, beer, and water, which are mingled with the well-rectified spirit of salt, are far wholsomer than other ordinary drinks. If a little pure Steel be dissolved in spirit of Salt, and then put to fair water, it will have almost the same taste with the *Spaw*-water, and if some quantity of it be drank, it looseth the belly, and evacuateth black Excrements, whence a man grows lively and vigorous, as if he had drank of the *Spaw*-waters.

And this benefit may accrue by it to all Travellers, who carrying with them a little spirit of salt in a glass, may at all times, and in all places, correct and amend their beer or wine in their Tuns, and give it a better relish: But because this spirit is more liable to be lost in a liquid form by any accident befalling the glass, therefore being coagulated into a dry form, it may be more commodiously carried about in a Paper or Box, of which the magnitude of a small Pease drank in one cup of water, quencheth Thirst better than a great quantity of water alone. This spirit or salt will be serviceable to men of all sorts, but to none more than to Seamen or Souldiers, in war-like expeditions, of which sometimes more die through want of water, than by the sword, who also for the most part contract their Diseases from the filths in Ships, which might easily be prevented. What will it profit a Captain of a Man of War, or the Commander of a Merchant-ship to have many men for his defence and service, if they are disabled by a Disease? Were it not then better to use all diligence to preserve their health, and to restore it when lost? Which may be

done with small Labour and Cost. A General brings an Army some time into the Field, of 10, 20, or 30 Thousand Men, and seeing that those observe no due order in eating and drinking, and being destitute of Medicines, if the *Plague*, *Fever*, or *Bloody-Flux* comes among them, they drop off one after another like Flies in Winter; when notwithstanding they might be succoured and helped in those Diseases by my Electuary, [*This Electuary I think to be the* Panacea Antimonij *made up with Sugar.*] Salt of Salt, or Spirit of Salt, inspissated or thickened with Sugar. The spirit of salt hath alwaies been highly esteemed, both by ancient & modern Physicians, for its great virtues which it sheweth both inwardly & outwardly; besides which, it is of great use in other Arts, as I have shewed in the *first and second Part of my Furnaces*. And that the Reader may see that I am not singular in what I have ascribed to the spirit of salt, I will here set down the Experience of that no less learned than famous Physician *Conradus Kunrath*; of the spirit of salt, as he hath expressed it in his *Medulla Destillatoria*, printed at *Hamburgh*, *Anno* 1638. in these words, *Part* 1. *pag.* 59.

The Great and Effectual Operations which are attributed to the Spirit or Oil of *SALT*.

The Spirit or Oil of Salt is not of so acrimonious a taste, as Salt commonly is: Nor hath it so great an acidity as the Spirit of Vitriol, but it tasteth almost like the juice of wild Apples, with somewhat of sweetness intermixt. It discusseth, dissolveth, consumeth, and dryeth, yet it doth not heat too much, but hath a temperate nature, mitigating and comforting the natural heat, which it also encreaseth, and dispelleth all things contrary to Nature, preserveth the state of sound humours unhurt, especially

profitable for those who are phlegmatick, whose viscous Saburra *of humidities it consumeth, taketh away* Catarrhs *which fall from the Head, and preserveth from all Diseases which arise from a noxious Pituity, Mucor, and Fluxes. Yea, those who use labour and study, shall perceive their Strength to be restored by it, and as it were renewed.*

Experience, the Mistris of things, witnesseth, That it is a present Remedy against the Falling-sickness*, being administred in good* Aqua-vitæ*: Against the* Apoplexy*,* Palsie*, or* loss of Speech*; as also the trembling and beating of the Heart, and all dejections of Mind; as also in the time of the* Plague*, or in any infectious Air, it may be administred with profit, by mixing half an ounce of the Spirit or Oil of Salt with two ounces of the Juice of Violets, and as much of the Electuary of Juniper-berries, in a Stone or Glass Mortar, and the Patient taking the quantity of a Filberd in the morning upon an empty stomach.*

This Compound-Medicine being given to Women with Child, facilitateth the Birth, and is highly profitable against various symptoms of Women in Child-bed, without any danger. If any desire to preserve their native heat, let them often use this Alexipharmack.

Whoever is burdened with superfluous moisture, let him take this Spirit or Oil of Salt daily, in Wine or some other Vehicle.

In Coldness, and continual Fluxes, which stop up the Breast, it conduceth much, and taketh away inveterate Coughs and grievous Asthma's*, which are stirred up by those Fluxes. It dissolveth, consumeth, and dissipateth depraved humours, collected and indurated in the stomach: and although of it self it communicateth little nourishment, yet it excites the Stomach to a good Appetite, and disposeth the Meat to a good digestion and*

passage through the body.

It helpeth in the Tartarous and indurated Obstructions of the Liver and Spleen*, which it openeth and relieveth, and hence removeth and taketh away the* Jaundice*,* Dropsie*,* Hypocondriack Melancholy*, and pains and affects of the* Ribs *and* Viscera*, and also whatsoever ariseth from Wind and Flatulency, and other symptomes proceeding from the said causes, it especially absumeth the* Anasarca*, or Water under the skin, and throughly removeth watery Tumours in the Genital Members or Legs, which for the most part happen to those who are Hydropical, Phthisical, or labour under a Distemper of the Liver. It also taketh away the great Thirst in those, which otherwise in this kind of diseases doth not lightly afflict, so that the Patient shall have no desire of drinking, but may remain some daies without. The same is also a Remedy against all putrid* Fevers*.*

In tormenting Pains of the Belly, and Cholick*, which are excited by the viscosity of humours, or intemperature of flatulency, or force of cold, and a dense and tough Phlegm driven into the Intestines; this spirit resolveth and consumeth, and so openeth the stopt passages of the Bowels, and looseneth the Belly, that it easeth the Iliack pains, whether it be taken at the mouth, or administred Clysterwise. In the* Lientery*,* Dysentery*, or* Hæmorrhage*, it is to be given in Clysters; in like manner in* Nephritick *Diseases, and the dolorous* Stone in the Bladder*, which it dispelleth and exterminateth.*

In Ruptures*, as the* Hernia *and* Enterocele*, let some drops be given daily in good Wine; let the Tumour of the* Scrotum *be also often anointed with this Spirit or Oil, and cherished by a fit Truss, or some other bandage, and in a few daies the sick will recover his former health.*

It killeth all Worms *in the Body, casteth them out, and prohibits their breeding again.*

It is a most effectual preservative against the contagion of the Plague*; and also is very conducible to those who are already infected. It also wonderfully profiteth such as have eaten Poisonous Mushrooms or Opium, as also those who are hurt by Serpents, Vipers, Spiders, and the like venomous Insects, it is accommodated both to inward and outward use, because it consumeth virulent humidities. For the stinging of Wasps and Hornets, it is to be applied topically.*

For fat Women, and those who are troubled with impurities of the Matrix, from a superfluous phlegmatic humour, it is very profitable; for by the benefit of it, every redundancy and incommodity of Phlegm is purified, consumed, and dried up, so that the seed may more easily rest in the Womb, and fertility be greatly promoted.

In protuberant Excrescencies of the Eyes, Films*,* Cataracts*,* Blisters*,* Pustles*, or* Spots*,* Dimness *or* Darkness of sight*, it is to be used in a good Collyry, or other commodious Vehicle. In* Blows*,* Bruises*, or* Falls*, when the Blood is congealed, (which we call black and blue) in the Eyes or Face, let a bit of a Sponge or Lint be wetted with the Spirit or Oil of Salt, and applied to the place affected; or else dissolve in the same a little red Myrrh, and with the Dissolution mix a little Honey, and anoint with it. It driveth away noise and pain of the Ears, also when the Ears send forth an ulcerous and purulent matter, the same Medicine may be administred with an happy success. And in these Symptoms it is to be mixed with Wine-Vinegar, and dropped into the Ears, and rubbed upon the diseased parts.*

In the Thrush*, and other sore mouths of sucking Children, also in the glandular or kernelly Swellings of the Neck, foulness of the Tongue, swelled and rotten Gums,* Scurvy *in the Mouth,* Tooth-ach*, superfluous*

humours and filths adhering to the Teeth and Gums, this Spirit or Oil of Salt is an excellent Remedy; as also in preserving from those Evils, it is to be conjoined with clarified Honey, and the Mouth, or parts affected in it, to be anointed therewith. Against the evil Affects and Ulcers of Womens Breasts, some linen rags are to be humected with the Spirit or Oil of Salt, and they will be quickly healed. The moist Itch, Tetters, Ringworms, *and other contagious Affects of the Skin, are happily cured by both the inward and outward use of this Spirit.* Ulcers *and fungous* Tumours *in the Venereal Disease, or others, if we would bring them to a suppuration, the Oil of Salt will effect it, being applied either alone, or mixed with other convenient Remedies. For the healing of venomous Ulcers, which pierce the Bone it self, as also all virulent Apostems, the Spirit or Oil of Salt is to be mixed with White-wine, and Barley-Flour, into the consistency of a Plaster, which is to be applied to the Sore.*

Also in cancerous, eating, and spreading Ulcers, it is very profitable, being mixed with the juice of Rhue, and aptly applied.

That I may summarily express its use both inwardly and outwardly, it resisteth all fluid and corroding Vices, and layeth the foundation of their Cure. In luxated, shortened, or contracted members and joints, it affordeth present help, being used alone, or joined with fit fomentations or Epithems.

In the taking away of Warts, *this Spirit is to be mixed with the juice of Marigolds, and applied to them: It also taketh away Corns, if after they are softened with warm water, they be well cut and anointed with this Oil. In the* Erysipelas, *St.* Anthony's *fire, this being mixed with Elder-Vinegar, and applied, is of great virtue.*

The Hands or Feet being corrupted or chapt by Cold,

are recovered by the benefit of this Medicine. This Spirit or Oil greatly conduceth to help the weariness and weakness of the Feet and other Members, restoring to them their strength and vigour, if they be well bathed therewith before the fire.

Moreover, in the dolorous Gout *it is a famous Remedy, and a profitable* Anodine *for allaying the pain, if besides its internal use it be also applied topically: For to this our Medicine are to be joined Oil of Turpentine, Oil of Wax, Oil of Camomile, or also Oil of Cowslips, with which the parts affected are to be well anointed. But where the members are contracted by* Fluxions *and* Catarrhs*, fit Fomentations are also to be used, and besides our Oil or Spirit, the dulcified Oil of Vitriol, and pure Oil of Turpentine, are to be mixed together, and the parts to be therewith anointed before the fire. And hence the Nerves and Joints are so comforted, that they will not so easily admit such Fluxions again. Also if there be* Tophes *or* Nodes *in the Joints, they will be discussed beyond belief; being duly anointed with this Oil, mixed with the dulcified Oil of Vitriol.*

It is also used with great profit both inwardly and outwardly, against the Cramp *and* Convulsion of the Nerves *by Cold.*

In external Wounds and Symptoms there often happens a Putretude, and also proud Flesh sometimes starteth up, and causeth great pain. These Protuberances being anointed with this Oil or Spirit, are presently dissolved and consumed, and also preserved from future corruptions.

In brief, this is a most excellent Medicine, overcoming many Diseases. Moreover, the Reader is to know, that this spirit or Oil of Salt, (besides those Virtues which I have declared) if it be diligently prepared, and rightly prescribed, may be used for the preparing of many

excellent and precious things in the Chymical Art; for it dissolveth Gold, Gemms, and other Stones, Pearls, Corals, &c. *so that they are reduced into excellent Medicines, in a liquid or potable form, highly useful for Mankind: But how those Processes are to be instituted, I shall here pretermit, But he that hath drawn a good foundation of working from that information which my* Medulla Destillatoria *hath faithfully propounded, let him weigh the matter with an accurate mind, and put his hand to the Work, there is nothing in it so tedious, but he will easily conceive; moreover, let him associate himself with honest, sincere, and skilful Artists, and take their counsel, then he will find out many Secrets of Nature, and singular Arcana's, and will see that his care and diligence hath not been in vain: Then let him use that Experience to the Glory of God, and the help of his needy Neighbour.*

The Virtues or most efficacious Operations of the *Spirit* or *Oil of Salt*, in which Gold is rightly dissolved, according to Art; or, when it shall be made an *Aurum Potabile*.

Philosophers and Physicians, endowed with the great Exercise and Knowledge of Things, have attributed to the Spirit or Oil of Salt, in which Gold is rightly dissolved, or the Aurum Potabile *made with it, very great operations in the body of Man, inasmuch as in all Diseases and Infirmities, of what name soever, it giveth present help, and in all dejections of the vital spirit, although they tend to the fatal period, it giveth such relief, that life and vigour may be yet somewhat farther protracted, if two, three, or four drops be administred as occasion shall serve in a good* Aqua vitæ *or Cordial Water. In like manner, if three drops be administred once a week in generous Wine, or* Aqua vitæ*, or other fit Vehicle, it*

renovateth a man, makes him youthful, changeth gray Hairs, produceth new Nails, and Skin, preserveth from various and diverse symptoms of Diseases, and preserveth the body in such a state, even to the prefixed hour of the Divine appointment.

These are the very words of that famous Philosopher and Chymical Physician *Conradus Kunrath*, in his *Medulla Destillatoria*; as the Reader may there see.

Now any may easily conjecture, that although this learned man had found out many things, yet that he knew not all, but what was known to him, that he divulged. But that as yet more might be done by that Spirit or Oil of Salt, than what he had set down, easily appeareth from that which he sheweth at the end, concerning the Oil or Liquor of Gold, prepared by the Spirit of Salt, which words are Truth it self, and much more may be done by the benefit of that solution. He hath written what Experience hath taught him, the rest he hath left to the study and searches of others.

Seeing therefore that I also (not to speak boastingly) have often handled Furnaces and Coals, and among others, have found this Liquor of Gold or *Aurum Potabile*, made with Oil of Salt, to be of great virtue, and knowing its great use, power, and virtue by experience, I will describe it in an open stile, lest so noble a Medicine should be buried. Such a Liquor of Gold as is here mentioned, is compounded of the purest Sol, and the most highly rectified and again concentrated Spirit of Salt: The Sol is to be first melted, and throughly purged with Antimony, then to be dissolved in *Aqua Regia*, and precipitated with ☿, to be edulcorated and brought into a subtile Calx, which must be heat red-hot (to free it from the ☿)

and then dissolved in strong and well-prepared Oil of Salt; being dissolved, abstract part of the spirit of salt from it, and a very yellow Liquor of Gold will remain at the bottom, which yet is not, fit for use alone, seeing that the Oil of Salt containeth too much Acrimony; therefore a drop of it is to be mixed with a spoonful of Beer, Wine, or warm Broth, before it be administred to weaken the spirit of salt; but if any desire to have it sweeter, instead of Wine, Beer, or Broth, it may be mixed with melted Sugar, or syrup of Roses. The Dose for a man of ripe age, is two or three drops, which if he shall perceive not to operate sufficiently, he may encrease to three or four drops, so long, till he shall find an evident operation, which appearing, let him encrease the Dose no longer, but rather diminish it a drop; and when the Oil of Gold rightly performeth its operations, these signs will appear: In the first use, a certain loathing or nauseousness of the stomach, will be perceived, when the Oil of Gold findeth there a vitious pituity, and endeavouring to expel it, driveth it downwards, and ejecteth it by stool. 2. The Excrements are as black as a Coal, and during the use of the Medicine, the sick maketh a discharge by stools at least twice, sometimes three or four times, without any impediment or sence of necessity, as is wont to be in the working of Purges. The Urine will also be thick and turbid, because the Medicine dissolveth the Tartar and Phlegm in the Reins and Bladder, and by degrees expelleth it. NB. That by the black Excrements, it is manifest, that Gold may be radically dissolved in the stomach of a Man, which some think to be impossible. The humane stomach hath a greater power in the destruction of things than the strongest fire, as may be here seen by the Gold: Yea, all things which are eaten or drank, in the space of

24 hours, it throughly dissolved and transmuteth into a new form of Excrements.

If the stomach of a man can effect such things, why not Art also? Yea, hence it is expresly proved, that the colours of Gold, at length, when it is radically dissolved and destroyed, do appear, and may be known, seeing that in Colours Blackness hath as it were the first and chief place, and containeth all others hidden and concentrated under it.

NB. That these black Excrements should not be cast away, but the radically-dissolved Gold ought to be separated from them, with which perhaps some great thing may be effected.

I some time since administred this Oil of Gold, for eight or ten daies successively, to a certain Infant, for the freeing his body from Mercury, which had been imprudently given him for the Worms; I ordered the Excrements to be saved, for some Experiment, which nevertheless, because they stood long and bred Worms, I could not use, but commanded them to be put to the Roots of a young Vine, which had not yet born Grapes, being but of two years growth, which produced a small Grape with large stones, which had golden spots like Stars, admirable to behold. This Example is worthy of a profound consideration. It also seems to me, that the Urine of those who continually use the aforesaid golden Liquor should be auriferous, although it appear not in the colour. The thing is out of doubt, seeing that men, in the use of the said Medicine, attract only a certain hidden virtue from the Gold, and again send the rest forth of the body, that that Gold is better than other common Gold: The Benignity of the Divine Being hath disposed and ordained every thing in the World for the best.

Seeing that in the Stomach of Man or Beast the Food is destroyed and putrefied, Nature taking a little from it only for nourishment sake, casteth out the rest by siege, which yet is not of so abject a condition, as to want its virtues? for if these Excrements be mixed with any Earth, moistened with Rain-water, and exposed to the open Air, there will thence spring forth divers Herbs, without the addition of any seed; but if the seed of any Herb be adjoined, then is also brought forth fruit of the same substance and quality; so that these Excrements may degenerate, and be converted into whatsoever Fruits we will: From which Fountain the multiplication of Herbs and Metals may perhaps take its original. Therefore it is necessary, that Putrefaction should go before Multiplication; which our Saviour himself told his Disciples, saying, *Except a grain of Wheat shall fall into the Earth, and die, it remaineth alone; but if it die, it bringeth forth much fruit.* The Axiom of Philosophers is, *Where Nature endeth, and leaveth the Work imperfect, there Art ought to begin*. But the manner of proceeding farther they have involved in silence. Nature from the beginning hath sublimed a Mineral *Ens*, or first matter of Metals, as much as it could, and brought it to the royal seat, or highest perfection: Art hath destroyed the most perfect body of Gold by corrosives, and being destroyed, hath again dissolved it in the body of Man: But if any know the manner of proceeding farther with it, he may easily reduce that Essence of the dissolved Gold into a better, and multiply it: But I would not have this taken for an Oracle, seeing these are only my Cogitations.

The Use of this Medicine is to be continued till the body is freed from all ill Symptoms; nor are any other Remedies to be intermixed with it, that its

operation may not be hindered: But before this Medicine be administred, a Dose or two of my *Panacea* ought to be given, (of which the *Second part* of my *Pharmacop.* treateth) for then its effects are to be admired.

This Oil of Gold, or *Aurum Potabile*, is of much greater force in all those Diseases, in which the simple spirit of salt is conducible, because the Oil of salt hath double the strength of the spirit, and also diffuseth its virtues much better, by reason of the Gold which is anatomized in it; the which, because it is of a hot and dry property, agreeth very well with the Oil of salt, whose nature is hot and moist: and hence it effectually resisteth all Corruption which may arise in the humane body.

Besides, the Virtues which the spirit of salt, and especially the Oil of Gold prepared with it, manifest both within and without the body; it is an egregious preservative against Drunkenness,**Spirit of Salt, a Remedy against Drunkenness.** which is the root of many Diseases, and the gate by which many evils enter: For strong Wine or stale Beer being drank, suffer nothing in the stomach, because it cannot restrain their subtile spirit, which presently flieth up into the Head, and disordereth and confoundeth all the senses. But if in the drinking, a little spirit of salt be mixed with the Wine, it openeth the Orifice of the stomach, and suffers not the spirits to fly upward, but restraineth and bindeth them, also mitigateth and represseth that unnatural Thirst, which otherwise the Wine causeth in excessive drinkings: Nor doth the Wine, which is mixed with spirit of salt, so easily hurt the Liver; for as the spirit of wine heats and inflames the Liver, so the spirit of salt corrects and cools it. Add that the spirit of salt permits not

the liquor to lie lurking in the stomach, but presently casteth it out by Urine: and the sooner the superfluous Wine is cast out of the body, the less hurt it can do. But this is to be understood of the spirit of salt well rectified, and subtilly prepared.

In short, I might sooner want Paper to write, than matter to express what good the spirit of salt coagulated can do, being taken in drink; I have said enough for the present; in my *Vegetable Work* I will more fully discourse of this matter, in which I now acquiesce. Whatsoever I have here written of a Medicine against all Sea-faring Diseases, and of the concentration of Corn and Water, against Hunger and Thirst; as also of the most efficacious use of Spirit of Salt, against Drunkenness, and of the melioration of Wine, Beer, Water, and other Drinks, is built upon the pure foundation of Truth, which Experience it self will sufficiently testifie; with which I put an End to this Discourse.

A True and Perfect DESCRIPTION OF Extracting good TARTAR FROM THE Lees of Wine, And that after a Plentiful Manner.

To the most Reverend PRINCE JOHN PHILIP*, Lord Arch-Bishop of* Moguntina*, High Chancellor of the Empire, and Elector, Bishop of* Herbipolensis*, Duke of* Franconia*, &c. my most Honoured Lord.*

I presume, you remember (most Reverend and Noble Lord Arch-Bishop and Elector) that about Two Years since, I crav'd Your Lordship's Licence, to Extract

Tartar from the Lees of Wine; which your Highness was pleased to grant me. From which Work, seeing I have been hitherto hindered by the multiplicity of other business, and the great Waste and Loss which is daily sustain'd in the Electorate of *Moguntina*, and Bishoprick of *Herbipolensis*, proceeding from the ignorance of the Lees, daily troubles me; I have determined to dedicate this gainful *Extraction of Tartar from the Lees of Wine*, to your Electoral Reverence, under whose Patronage I may be safe, and for this Reason especially, Because none of the Princes of *Germany* enjoy a greater Vintage than your Reverend Highness; to whom not only a good part of the Tract of the *Rhine*, but almost the whole Jurisdiction of *Mœne*, together with *Franconia*, by Divine Providence, belongs; being very fruitful in Wines; where also much Lees are cast away, thro' Ignorance *of the way* of extracting their *Tartar*, for the Good of the Country, from which a good Spirit of Wine might first be drawn by Destillation; the *Tartar* contained in the thick Lees, and remaining in the bottom of the Still, is by all Men cast away, as unprofitable, a few excepted, who with great Labour dry them, and of them make clavellated Ashes: Which Waste or Loss of the Lees, seeing that it makes every year an incredible Loss of *Tartar*, I have thought fit to expose the Knowledge of this Mystery to the Eyes of all Men, for the Good of my Country, by which some being instructed, may set about the *Extraction of Tartar* with great Gain, not doubting, but many, when they shall see this Labour to be profitable to others, undertaking the same, will bring great Profit to their impoverish'd Country.

Therefore I trust, this Little Work will be acceptable to your Reverend Highness. And I pray the Giver of all Good Things, to furnish both your

Soul and Body with His Gracious Benefits, who study to be

Your Highness's most
Humble Servant,
J. Rud. Glauber.

A True and Perfect Description of Extracting good TARTAR from the LEES of WINE, &c.

First of all, we must know what Dregs are, or what is their Essence and Nature, how they are resolv'd into Parts, and the Good separated from the Unuseful, because without the knowledge of the thing we can't give a right judgment of it, but must erre: Therefore it is necessary that we know what we have in our hands, that we may the safer handle it. For this cause I shall shew the Ignorant what are properly Dregs, and which way the better part may be extracted, that hereafter so great a Good may not by ignorant sluggishness be laid aside, but converted to the profit of all.

All thick matter, whether it be of Wine, Beer, Vinegar, or the like, when it has stood a little, sends the earthy, heavy, and more thick part of it, to the bottom, which we call Dregs or Lees, upon which the clearer part flows, to be separated from the impurity, as in the making of common drinks may be seen.

There was no use of these Dregs heretofore, except the making Brandy with 'em, and the rest to be thrown out of doors, in which was much Virtue, which Men did not think of: But that all things are

not unprofitable which the Vulgar pronounce so, and that there may be great Virtue in ordinary Matter, I shall demonstrate by this Excrement of Wine.

When the Juice out of the Winepress is put into Hogsheads, that there working, the dregs falling to the bottom, the clean Wine may come out, the superfluous Salt of new Wine, while it is squeez'd out of the Grapes, with the same labour is separated, part sticking to the sides of the Vessel, which we call *Tartar*; but the greater part of this Salt or Tartar, imply'd in the turbid dregs like Sand, sinks to the bottom. Besides, this is the property of Salts, that by a hot humour they make a thin water, the humour growing cold, not being able to keep all the dissolv'd Salt that is compell'd to separate, which excluded the Vehicle, seeks a new place. If you put into the Solutions Sticks or Strings, that Crystalline Salt, in a cubical or angular figure agreeable to its nature, will stick to them; or otherwise it cleaves to the sides of the Vessel.

'Tis beyond all Controversie, that the Grape above all Vegetables has much Salt, not sensible, unless it is fermented with a minute heat, which working by Nature, endeavours a separation, while the purer and more liquid part retains so much Salt as the Wine has need of, the thicker Salt being exturbated, part of which incrustates the sides of the Vessel, part of much thickness sticks, and subsiding with them, gets the appellation of dregs, from which the vulgar are wont to destil a Spirit or Brandy Wine: But these dregs are not a useless matter, as they have been hitherto thought, for much *Tartar* may be extracted out of 'em with little cost.

But he that shall search more narrowly into the thing, will find a way whereby poor and decaying

Wine may be made good.

In some places, as suppose in *Franconia*, *Alsatia*, *Austria*, and the *Rhenish Tract*, most fruitful for store of wine, these lees of wine are made nothing of, but are given to Swine and other Cattel to drink, by which means the Tartar in it so purges 'em, that they are soon fat; they seldom try to draw the spirit thence. Otherwhere, where wine is not made, especially where they fetch their wine a great way, they are much esteemed of, not only because wine may be drawn from 'em, but also put in small Hempen sacks, are pressed in adapted Presses, a good mixt wine flowing thence saleable to others; yet this being but a small wine, many have destinated it for Vinegar, to which it best agrees; but he that knows how to restore to it what it lost in pressing, may make a palatable strong wine, not inferiour to what it was at first: But this Secret belongs to another place, I shall here only treat of Vinegar and Spirit of Wine.

In *Holland*, *France*, *Italy*, this pressing of the dregs and preparation of Vinegar is of frequent use, and very profitable to many, who get nothing but what they squeeze out of the dregs they have of the Vintners, and convert the Wine into Vinegar; the residue of the dregs they put into Barrels, and sell it to Hatters, which being boil'd in water, they thicken rough Hats with it; for Wool is brought into a little compass by hot water, and by how much the hotter that is, the Hats are made the thicker by it: For since it is the nature of Tartar to make the water wherein 'tis diluted hotter than fire, and since there is much Tartar in the dregs, by virtue of which, water acquires a more intense degree of heat, which the ignorant Hatters ascribe to the limosity of dregs,

rather to be attributed to the inherent Tartar, hence they put so much dregs in every pot as they know to be needful to the constipation of the wool.

And this is the use to which prest Lees are put, but if they have a greater quantity than the Hatters use, sometimes they are corrupted, part turns to Worms, and afterward to a most stinking dirt fit for nothing. When they sell them to the Hatters, then the Vinegar made of the wine prest out of them, which cost them little, brings 'em great profit, otherwise they would not gain much by their own Art, if they were not eas'd by the Hatters taking the residue.

But after what manner Vinegar may be made, I shall briefly shew: Vinegar-makers dispose many Hogsheads upon Stands a foot high from the ground, under which a pot to receive the Vinegar is set, erected in a hot place, the upper head being taken out, about the middle of the Hogshead they place two pieces of Wood across, sustaining another foraminous bottom, upon which they put the Vinous dregs, filling the Vessel even to the top, then they cover it with the head or some good square Cover, that little Air may enter; when in two or three daies, by putting in your hand, sufficient heat is perceiv'd, the wine which before was prest out of the dregs, is to be pour'd to it, so that the wine may be above the dregs, so the Hogshead close covered is left, till on the opposite row another Hogshead can be filled with the like dregs and grow hot; then the Wine being drawn out of the first hogshead, is poured into this, till the dregs in the first hogshead begin again to be hot, which are again to be macerated in the first Wine. This mutual affusion and depletion of the Wine is to be repeated till a just acidity follows, which may be done in the space of two or three

weeks, according to the heat of the Air; which will be good and permanent Vinegar, to be kept for sale in another Hogshead. Presently the first dregs being hot, fresh wine is to be pour'd to them, doing all things as before, till this wine also shall become good Vinegar. If you have many Hogsheads, you may make Vinegar all Summer only, but if you will also work in Winter, the place may be made hot by the help of a Furnace.

After this manner in *France* and *Holland*, many Families are maintain'd and enriched, by the dregs of Wine prest and converted to Vinegar.

And now I shall produce my Invention, a good Gift of God, as I take it, to good men; 'Tis certain, that in Viniferous Countries, where much dregs are bought for a small price, they may obtain a profit to themselves not to be despis'd; for which (next to God) they are beholden to me, who by unwearied toil have found this Science, and let 'em shew their gratitude towards Needy Persons, lest they incurr the displeasure of God, and so turn this Blessing into a Curse.

First of all, let there be a good Press, with a long Beam, from which hang weights, let there be put in small bags at least 5 or 6 Firkins of Lees, and them soundly prest.

The wine that comes out by pression, you may turn to Vinegar, either by the help of other Lees, or some other method; pour as much of the thick in the sacks with a due proportion of water into a Still, let it not boil in stilling, the Head being on, apply the refrigeratory, manage the destillation as otherwise Spirit of Wine is wont to be drawn, keep the Spirit proceeding thence till there is a good quantity of it, which you ought to rectifie or clarifie by several

destillations: (tho this Spirit is not abundant in the dry dregs, yet there is sufficient to pay for the making of the Vinegar and Tartar) when there comes an insipid water, take out the fire, open the Pipe or Cock coming from the Still, let the water with the dregs run through the Channel into a great sack put to the Press, when 'tis close ty'd, press it, that the moist may be separated from the dry: the Liquor cooling in a peculiar Vessel, and congealed into Tartar, will stick to the sides, the rest falls down like sand: Take out the dregs remaining in the sack, dry them in the heat of the Sun, burn them under a Still as wood, and you will have very sharp ashes, commonly called clavellated ashes, useful for *Dyers*, the price of which (at least) exceeds the pression and preparation of Tartar. When you have finished one destillation with the Press, fill the empty Destillatory with fresh water and dregs, as before, and while you draw spirit thence, press the first dregs, and continually put the destillation to the same Press, which coming out hot, don't put it to the former, but give proper Vessels to each destillation. The day after, put the first water from which the Tartar went to the bottom, to the third destillation, instead of fresh water, that is, by dissolving and destilling new dregs in it, as I have taught: Let the fæces of the fourth destillation be pour'd in the second water, which hath let fall its Tartar, and so afterwards, by which Compendium you will make no waste of Tartar, but what remains in the water, may take encrease from the new dregs to which it is pour'd, and it will give its Gain: But if you will, you may animate that acid water from which the Tartar is separated, and with a small charge, by Grain and Fruits of Trees, give it life and soul again, that it may again be made Wine, not unlike the first prest from

the Lees, after the same method it is turn'd into Vinegar, (because 'tis already sharp, the life or soul only that preserve from Corruption being wanting) the way of proceeding will bring great Gain to him that understands it.

If you know not the administration, do as I have order'd, and instead of common water, dissolve the hard dregs in this acid, and you will have good Tartar; but that languid water may also be adhibited to other uses, which I shall set down in the end of this Book: This do, that the fæces be not burnt by too great a fire, nor the spirit stink, and the still be spoil'd, which you may prevent if you anoint the bottom with Lard before you put in the heavy water, and draw off the spirit. Here I might shew a Compendium whereby the dregs, tho' dry, should not be in danger of burning, but it would be long and tedious to the Reader. But if you mind diligently what I have written, you will get enough.

When you have gotten a good quantity of Tartar from the Lees, not neat to outward appearance, but very like dirt or sand, purge it yet more, that either it may be reduc'd to a very fair Crystal, or till it cleaves in great Fragments to the sides of the Vessel, which you may effect by the following Way. Fill a *Vesica* with limpid water, almost to the top, put a little granulated Tartar into that water, soundly boiling to dissolve, putting a stick to the bottom, you may see when it is dissolv'd, add more by degrees, till no more will melt in the water, which you may thus find out: Fill a Pewter Saucer with this Liquor, if it contracts a little skin or cream, it shews that it has enough Tartar to produce Crystals, but if not, add more Tartar, till you see this sign in the pot; while it boils, add the scum taken off with a perforated Brass

Ladle, to the dry Lees, which by reason of the Tartar adhering, when burnt, conduces to the clavellated ashes; when the boiling has drawn Tartar enough, let it be let out thro' the Pipe of the Still into a clean Receiver, where while the water cools, the Crystals will incrustate on the sides; apply the rest of the water to the same uses, you will do better; if you shall change it into Wine or Vinegar, let the Crystalline roughness remain in the Vessel, for if you add a new boiling, greater and fairer sorts of Crystals will be made, because by how much the thicker this Tartar is, so much the dearer 'tis held; and thus you may conciliate thickness to your Crystals. When it shall seem enough, pour the rest of the Solutions into another Vessel, in which the first Tartar has concreted, let it dry of it self, afterwards strike the sides of it with a great blow, and great Fragments of Tartar will fall down, which you may sell for profit, put the vessel to the same labour again.

This is the exact description of producing good Vinegar and Tartar necessary for many Arts, from the basest dregs, and of justly getting much profit with little pains.

Now I proceed to make the Wine which some call Adust, or Spirit of Wine, of the Lees of Wine, without any Costs.

After the defecated Wine is pour'd out, put the fæces into the Still, add as much water as the dissolution of the inherent Tartar requires, kindle a fire, stir it at the bottom with a wooden Ladle, that it may not burn to; when you can no longer bear the heat of the water with your hand, and the spirits break forth, take out the Ladle, put on the Head, and destil till you perceive no spirit, but meer Phlegm; the remaining Liquor draw out into a sack close ty'd,

work it in the Press, and you will have spirit of wine by destillation, and also Tartar by expression, concretion, crystalisation, with double encrease; as I shall shew more clearly by and by, that before you begin to work, you may be sure, how much you hope to gain thereby, lest you labour in vain, maturely consult that you may discern by a premis'd computation what is to be done.

For instance, If five Firkins of Lees cost half a Doller each, five Firkins will yield two R. Dollers and an half; from these I press out two Firkins of Wine, two Firkins remain in the sacks, one Firkin is supposed to waste in the transfusion, when yet a Vessel seldom soaks up four quarts: I turn the two Firkins of Wine into Vinegar; the two Firkins of thick Lees being diluted with Water, I draw Spirit of Wine, and press out the Tartar; this Wine drawn by the Fire, together with the dregs left of the Tartar, being reduced by burning into clavellated ashes, do equal the Charge of making the Vinegar & Tartar, but two firkins of dregs afford from 40 to 100 pounds of Tartar, as the Wine is sweeter or more acid, (tho' the harsh affords more Tartar than the sweet) but if they yield but 40 pounds, this Tartar refunds the price of the Lees; the Spirituous Liquor and clavellated Ashes, recompence the Wood, and the two Firkins of pressed wine you have over-plus to be turn'd into Vinegar.

Or if you buy two Firkins of Lees for one R. Doller; first you may draw off the spirit; after that, you may press out about ten pounds of Tartar, both together saleable at one Doller, as much as the Lees cost; all the Liquor of the Spirit will be clear gain, by an egregious short labour to grow Rich. Suppose a Firkin to cost a Doller, and to yield not above 9

pound of Tartar, each of which is worth two Bazeins; tho' some Lees are better than others, yet seldom any are found so poor, that do not afford their value in Tartar; even the *Rhenish*, *Franconian*, and *Austrian*, one Firkin yielding one Doller, oftentimes affords fifty pound of Tartar, or more. Besides, we must note, if the Lees are dear, Tartar and burning spirit of wine can't be cheap, because the dearness of them depends on the scarcity of wine: But if the Lees are dear, the Vinegar, Spirit, and Tartar cheap, (which yet was never known) so that the quantity of Tartar will not yield the price of the Lees; neither also can you have the Vinegar and spirituous wine *gratis*; yet you shall have this profit above others, living on Vinegar and burning wines only, that the Tartar and clavellated Ashes collected from the refuse of the eliquated wine, by others rejected, you may get an help, that you may sell the spirit of wine, that cost you little, for more than otherwise. If therefore he gains by only pressing wine, or destillation of the spirit, how much rather you that acquire both Vinegar and spirit of wine from those dregs for a gratuity?

One thing more I add for confirmation: If 8 Firkins of Lees, that cost 4 Dollers, make 4 or 6 Firkins of vinegar, or one of burning wine or brandy, that vinegar or brandy yields 10 or 12 R. Dollers: The prest or destilled dregs, if they give fifty or sixty pound of Tartar, they equallize the first price of the dregs; but if there be a less quantity of Tartar, the vinegar or spirit will stand you in but little, which being made better, or sold cheaper than ordinary, you (the seller) will allure buyers before others.

Some man may say, the Art indeed has been unheard of, and is gainful, but does not agree with

every age and condition; for all don't understand Merchandising, but rather some abhor it, seeing the Scriptures compleatly testifie, that the fraud between the buyer and seller sticks as fast as a pin between the stones of a wall; to whom I answer, that to every Christian an honest Occupation is permitted by Divine Providence for the sustentation of him and his, but he need not burden his Neighbour in any case. For that it is lawful to endeavour a livelihood this way, or that, is attested to by a laudable example, in both the Old and New Testament.

This is the true way of pressing wine from Lees, and reducing it to Vinegar, and drawing out Brandy and Tartar, and incinerating the refuse.

It remains that I set down the uses to which the rest of the water from the Tartar may be adhibited with profit; but we must know by the way, that the sourness in that water is nothing but Tartar dissolved, which does not take a Crystalline form at the sides of the Vessel: therefore this acid water performs whatsoever is effected by Tartar diluted in common water.

Since there is no man but knows how to dissolve Copper in tartarised water, without the help of salt, as in the dealbation of ordinary Coins and Silver Vessels among the silver-workers may be seen, who take away the Copper sticking in the superficies of money or silver-vessels by boiling, the silver appearing as if it had nothing of copper mix'd with it: to this work the aforesaid water may be very profitably applied; and seeing that a great quantity of it remains in the working of the Lees, it can scarcely be better imploy'd than by the following method. If the viler Marcasites of Copper, every where obvious, and which cannot otherwise be melted with profit, as

also the *Scoria* or dross of Copper, which is thrown away, be boil'd in this water, it will attract the Copper to it self; cast in Filings of Iron, and they will be exalted into Copper, and the extracted Copper will be precipitated from the water by the addition of the Iron. This gradation of Iron into Copper being done, which in outward appearance will be like a dirty Mudd, it is to be edulcorated with clear water, and then throughly melted by the force of fire, which will yield a very fair Copper, no way coming short of other Copper in goodness. Which Labour is very profitable, because a great quantity of tartariz'd water proceeds from this Work; but that it may the more easily act upon the Copper, in extracting it from the stone or Marcasite, a little salt is to be added in the boiling.

But if the Marcasite or Copprious-stone abound with too much sulphur, which yet seldom happens in the more ignoble Marcasites, they must first be torrefied, that the sulphur may be burnt, then to be ground, and boil'd with the tartaris'd water, and precipitated with Iron; which way more Copper is acquir'd than was in the Copprious-stone it self, because while it is precipitated, part of the Iron is exalted to Copper, part turns to Vitriol unlike to the natural in hardness; for a green solution remains, whereby Cloth and Yarn are made as black as with common Vitriol; also it affords the best Black for Shoemakers to colour their Leather, and is naturally adapted with Oak to conciliate a black colour to Wood.

If this vitriolated Water be boil'd in an Iron Pot till it be dry, and the residue melted in a strong fire, you will obtain a most tenacious or tough Iron of wonderful virtue, if not to be preferr'd to good

Copper, at least to be compar'd with it. And so the common Copprice-stone of Iron is better than the filings or scales of Iron, if with the Lees of wine it be reduc'd by the spirit of the world into small Balls, when you melt them, a very ductile and pure Iron will come out, fit for more uses than common Iron; which labours if any will enter upon, they will reap fruits not to be despis'd.

It would not be beside the matter to annex the manner how you might use both your Tartar and Ashes at home, neither that you might be forc'd to sell them abroad, but it would be too long, and rather hurtful than profitable to the present business. This I think to treat of farther another time, by the Grace of God.

THE

FIRST PART

OF THE

Prosperity of Germany:

Wherein is Treated of

The Concentration of Wine, Corn, and Wood, and the more profitable use of them, than hath hitherto been.

TO

All those Patrons that Love GOD, and favour their Country,

***HEALTH*.**

Ye Pious, Prudent, and your Country-loving Patrons.

The Most Excellent Glorious God, and our most Merciful and Bountiful Father, hath (out of his great Love unto, and Fatherly Care of us, from Eternity) set Nature before our Eyes, that he might signifie to us his Will; which said Nature, is no other thing but the proper, eternal, and only Will of God. To this Nature, God hath (as to his obedient and faithful Instrument) absolutely delivered, and committed his Will and Command to be by her faithfully and diligently performed; she accomplisheth the Task imposed on her, without intermission, nor resteth she one moment of time from doing the Divine Will with her utmost study and endeavour.

Therefore, deservedly ought we to learn to know, worship, and love the Creator above all things else whatsoever, seeing the Creator is known by the Creatures.

If his Creatures be great, and unperceivable to our sight, and so wonderful; certainly it of necessity follows, that the Creator is far greater, and far beyond all Human Understanding; and this, everyone may easily understand: 'Tis therefore clearly and evidently manifest, that God Created all things for the service of man, that he might thereby acknowledge the Divine Bounty, and Honour, and fear the Creator, and bestower of all good things, and yield him due Thanks for his Gifts.

But seeing that it may so be, that the most just God will sometime or other, at last (being provoked by the perfidious malice of men, avenge himself on the most Impious living of this perverse World, by bringing scarcity of Food, (War, and the Plague); and seeing that it may so be, as that the small Company of the Pious, lying hid amongst the Impious Crew of the wicked, may partake of the same punishment:

Therefore I thought it very expedient, with a cheerful mind to publish (to the Honour of God, and my Country, and for the comfort and solacing of its Pious Inhabitants,) the Talent that God hath vouchsafed unto me, by the help of which, very many such Calamities as may come, *viz.* Famine, War, and the Plague, may be prevented.

But the way I have pitched on to serve my Country in, doth chiefly consist in the manifestation and Revelation of those most great Treasures that lie hidden in *Germany*, being such as by the regardlessness of Men have been hitherto unknown, unsought, and not gotten forth. I have therefore endeavoured, faithfully to manifest in this present Treatise, by what means those Treasures are to be sought for, and rightly ordered for the profit of my Country; and withal, to open the Treasures of the Noble State of *Germany*, wherewith it is most abundantly enriched, beyond all the other Countries of *Europe*, and hath hitherto enjoyed, and used (but not so well as it should have done) *viz.* Wine, Corn, Wood, Minerals, and Metals. For Ungrateful Men have extreamly wasted unprofitably, the most wealthy, and rich Benediction of God, who hath bestowed Wine and Corn on them, in abundance, and the Relicks (which they spent not) have they suffered to corrupt and perish with lying. Nor is there any body that doth in the least entertain any thoughts, by what means such an abundance of so great Gifts, might be kept and preserved for future years, which may be accompany'd with extream scarcity and Dearth. Every one shifts for himself and his, with that plenty of Goods he enjoys; and leaves another to take care for himself, and to see for time to come, that he provide himself for things necessary whereon to live. And it is come to such a pass, that

the overplus which remains of the abundance of the Blessing of God, is meerly cast away through a careless disregard, and so nothing is preserved for after times. And yet our Lord Jesus Christ himself when he fed many thousands of Men with Bread, commanded his Disciples carefully to preserve the remaining Crumbs, that nothing might be lost; the which without all doubt he did for no other end, but that we might have the Gifts of God in high esteem. But where shall we find such as will imitate, and do the same; certainly no where, which is inexcusable with God and good Men. Certainly such a largess of Divine Gifts, is not bestowed on us, that they should miserably perish, or be cast away; but we should rather labour and take care of diligent laying up and preserving (like so many Laborious Ants) all that overabundantness which we cannot make use of. Let it be but considered, I pray, in what great heaps Corn lies heaped hoarded up, and is spoiled. And is it not the same with Wine, which being gathered in such over-great quantities, is become vile and abject, or cast away?

What, cannot there be store laid up out of this very plenty (which now is grutched at, as 'twere) as so many great Treasures for future Calamitous Years?

Well however, though as yet this hath been left undone, yet I am confident, that some good Housholders will be found, that will not despise this Instruction and Admonition of mine, but will condense the so much superfluity of Wine, and Corn, and preserve it against future Years scarcity. Nor do I at all doubt, but that others, after they have by this Book well learned the manner, will turn the superfluous, and cast away Wood (which lies and rots, and is reduced to nothing) into Salt-petre in

great quantities; that by its help the Enemies may be resisted, and the Inhabitants defended. But in the three following Parts, which treat of the Concentration of Metals, and Minerals, wherein all kinds of Medicaments resisting natural Diseases, shall be taught, I know that every one will find refreshment, and help, against the future Plague, and Contagious Diseases. So then, when we have Food and Drink necessary for a Livelyhood, and Salt-Nitre to defend us against our Enemies, and Medicines serving for the preservation of us in Health, there remains nothing else we can desire, save a little Gold and Silver, by which we may exercise Trade, or Merchandise, and furnish our selves with Outlandish Wares. The which, that we also may get out of those Mountains, we every where meet withal, and out of those abject, and given-over Mine-pits, I question not, but (God permitting) to effect it, and clearly to shew it in the three following Books of the Concentration of Minerals and Metals. Upon this account I would no longer keep by me this small Book of the Concentration of things, but publish it to the Honour of God and my Country, (it being a Talent vouchsafed me by God.)

I do therefore Dedicate it to all Pious, Faithful, and Good Housholders, hoping that my sincere Admonition, and Instruction, will find some place, and not be rejected.

The three Parts I promised, shall shortly follow: Furthermore, I offer my most faithful help to every one in the opening and revealing the said Concentration of Wine, Corn, Wood, Minerals, and Metals; for all things being in a readiness, I can easily shew the manner of Concentration. And seeing I am ignorant, how long a time the most Merciful

God will vouchsafe unto me, the use of life and light; I would not willingly bury with me a Science so eminent, so Noble, and so profitable to my Country. But if now it should so fall out, that few or none should at all mind it, yet have I done my part, and satisfied my Conscience. Though indeed I do not in the least doubt, but that there will be some good and faithful Housholders, by whom these Profitable Inventions of mine, will be regarded, and be made use of for God's Honour, and for the Conservation of the Country, and its Inhabitants.

This I certainly know, that if this Counsel, or Direction of mine, concerning the Concentration of Wine, Corn, Wood, and Minerals (which proceeds from the simplicity and sincerity of my mind) shall find any place of entertainment, that our most praiseworthy Country of *Germany*, will in a few Years space become most exceeding happy, and be so enriched, that both high and low will be much joyed, and praise God, and give him thanks.

But I easily conjecture with what various and different Judgments this Off-spring of my Brain, will be expounded. One will haply give credit to the things I have said; but another will condemn and disdain them, as mere Impossibilities, and Dreams. But however, the truth will at length break forth, and the work it self will purchase to its Master due Praise, and herein I content my self. The most Blessed, most Merciful God, and our Father, that great Housholder, bestow on us his Divine Benediction, that so we may institute in most places of this our most dear Country this Concentration of Wine, Corn, Wood, and Minerals; and may by the help thereof obtain such Treasures, as may serve for the sustaining of our life, in time to come, and for

the resisting of our enemies, and for the Glory of God, and the help and succour of very many needy ones in Distress.

The PREFACE.

If the Proverbs of the Ancients are to be embraced as wholsom Doctrines, then certainly this (being none of the least) is not to be rejected; and is thus, That he that will not hear, 'tis fit he should afterwards feel. *The meaning of it is this; If so be any one be regardless of a warning, and so come to damage, every one is wont thus to say of him, He is but justly rewarded, why did he not yield to a faithful warning? who will help him now?*

But however, I have endeavoured (for the Honour of God, of the Magistrate, and of my Country, and the benefit of my Neighbour) to shew, by good Admonition, and by a profitable Testimony, by what means, that great plenty we have in these as yet prosperous times, wherein we have abundance of Corn, Wine, and other things in great plenty throughout all Germany*, may not unprofitably be lost; but be preserved for support in those years of scarcity that are next to come, according as* Joseph *that most excellent Steward mentioned in Holy Writ is said to have done.*

And now that there may be as much prevention as is possible, that the Wine, and Corn perish not with lying, but be preserved against a future scarcity, I have published this little Book for every ones view, concerning the Concentration of Vegetables, Animals, Minerals, and Metals, in which, the prosperity and felicity of all Germany*, and indeed the Universal Treasure and Wealthiness of the whole World, is seated.*

And because such an abundant plenty of all these

things begets a nauseating and loathing, as it were, of those Minerals, Metals, Wine, and Corn, wherewith Germany *exceeds all the other Countries of* Europe*; I judged it well worth while to constringe, or concentrate this plenty into a little room, and preserve it from the loss and destruction of the same, arising from Negligence and Contempt. For when such vile, or cheap things are driven into a small compass, the baser and unprofitable part goes off, and the nobler and better part is driven together, and preserved, and doth not so easily become corrupt as afore, when both good and bad are commixed together.*

And this is to be understood of the Minerals, and Metals, and of Wine, Corn, and Wood. For where the Water is separated from the Wine and Beer, and the more Noble Parts are concentred, as it were into a Centre, you may even preserve them as long as you list. And when you need either Wine, or Beer, the concentrated parts may be relaxed by the apposition of Water, and be enlarged, insomuch, that one Vessel will hold six Vessels of Wine; and this, taking up but one place, and yet contains six times the quantity, there will not need so much costs, nor will so much Wine be spoiled by vapouring away, as would be by six Wine Vessels, which must always be kept full. Besides, this farther benefit ariseth hencefrom, viz. *That out of such concentred Juices (if they be at hand) there may be made every* Autumn *new Wines sooner than ordinary, 4, 5, or 8 weeks time or more, and be sold at a bigger rate, than in the very* Autumn *Season, when the Grapes are ripe, and every Body furnished with Wine.*

NB. *For such a work there is requisite a certain peculiar Instrument, and artificial knack, by the help of which the Must may be holpen to a speedy fermentation; there are also other Conveniences which arise from these*

thus concentred Musts, which for Brevities sake we here omit. So likewise Beer being after the same manner concentred, doth bring a many more Utilities than ordinary Beer. For that Corn which eight Barrels were scarce sufficient to contain afore, need no more but one here, the which being put in the Beer Vessel, will not turn into Vermin; nor will it flie out of the Barn, but may be used after 10 or 20 years. Such Artificial Factitious Ales, seeing they are (in their condensation) boiled a longer while, are far better than the common sorts which are made of dried Corn, or Malt. Whosoever therefore shall in a great plenty of Grain, buy up Corn, and condense it by such Artificial Concentrations, and so lay it by, till a scarcity comes, will gain abundantly, and will not only get to himself an honest, and to others no ways injurious profit; but will withal (being thus studious of Charity and Mercy) deserve exceeding well of his Neighbour, if he helps him in his great necessity, and he will readily pay him for his Corn, whereby he may get Money to sustain his Family and be a profitable gainer.

So then, no body is injured by this condensation, and concentration of Ale, or Wine, but both the Buyer and Seller are Gainers, and this should of right, be in every Man's heart, what condition soever he be of. It would be well done of Noble Men, Princes, Kings, Emperors, and other Magistrates and Common Wealths, if they would provide in their Store-houses for Warfare, such kind of condensed Liquors, and Juices, that so the poor may in a time of scarcity be made partakers of that plenty, and they will have no loss thereby, but rather benefit.

But the Condensation of Wood, and turning it into Salt-petre or Nitre, is far more profitable than that of Wine or Ale; for wood may be had even as it were gratis*, and be with a very small Cost transmuted into Nitre, the which may be kept without hurt in the*

Storehouses for a long time, seeing it is not wont to corrupt or perish, and be there conserved until it be made up into Gun-powder with Coals and Sulphur, both which are also not subject to corruption; so that it is not so very necessary (nay, rather it is hurtful) to have such vast quantities of Gun-powder in their Castles and fenced places. There are examples enough of Towers in which Gun-powder hath been stirred up, which either through negligence, or else by lightning, being fired, have in less than a moments time o'return'd whole Cities, and slain abundance of men. Now this mighty inconveniency may easily be prevented by this only Remedy, viz. *If the Powder be not made up, but the matter thereof (*viz. *Nitre, Sulphur, and Coals) be only kept in readiness, wherewith the said Powder may be made, as necessity requires: Besides, herein also doth the concentration of Wood exceed (as to profit) the condensation of Wine and Ale, not only because there lie vast heaps of Minerals in* Germany, *(which not containing a fixt and corporeal Gold, are therefore disesteemed) that admit of a separation of their better part, and fixation of it by Nitre; but withal, the meaner Metals (their superfluous Sulphur being burnt up) may be transmuted into better; and the perfect Metals,* viz. *Gold and Silver, may (by the help thereof) be destroyed, and be enforced or concentred into a better part; the which thing the following* Second, Third, *and* Fourth Parts *treat of.*

So then, this Transmutation of Wood into Salt-petre or Tartar, of both which not only great quantities may be sold, but may be also applied to sundry uses, will bring to our noble Country of Germany *(in which there is an incredible quantity of Wood to be had almost every where* gratis*) a most notable encrease of Power and Strength, not only against its future, but its present Enemies.*

Whosoever therefore shall have abundance of Wood, shall likewise be enriched with store of Wealth, provided he will but set his hand to the work, and not fear that ever Salt-petre *will be such a Drug, as to be of no value, and not vendible: And yet if it should so be, yet in the Explication of my* Miraculum Mundi*, already published, I have manifested so much, and will, in the three following parts of this Book, manifest such things as concern the use of this* Salt*, that there will never want such, as penetrating into the knowledge of these Secrets, will not full well know its Use.*

He that hath Eyes, let him look about, and use them, for the time comes, yea, and by little and little approacheth, in which Knowledge will be a profitable thing; and it will be well for those who are seasoned with the knowledge of things profitable. Verily, Knowledge is better than store of Goods, for no body can carry them with him, nor (in some cases) help either himself or his Friends with them. Happy is he that can say with the Philosopher, All that is mine do I carry with me*: How injuriously do they speak of the most bountiful Lord God, who accuse Him for that He hath forborn the bestowing of Wine, plenty of Corn, Pome-Citrons, and Gold on some Countries, and yet fully as great Treasures are to be found there, if the Eyes of the Inhabitants were not darkened? If there were nothing else, yet certainly there is Wood to be found, which without any labour, costs, or trouble of Rich or Poor, doth grow night and day, and offers it self unto us, and as it were, saith unto us in these words;* What! am I of no use? Do not I come forth to thy view, that thou maist by contemplating on me acknowledg the Divine Bounty, and make use of me with thankfulness? *There is not therefore any reason why one Country should exalt it self before another, because it is better; or contrarily complain, that the Divine Benediction less regarded it*

than other Countries; no, each Country hath enough, if it would but be content with what it possesseth. As for those Countries which are even destitute of Wood, they do nevertheless abundantly enjoy the Divine Benediction; witness Island*, and other cold Northern Countries, which have their Corn, and other Necessaries for Life, brought them out of other Countries. But now on the other hand, these Countries afford Cod or Stock-fish dried; and so, though they want Trees, Fruit, Corn, and Wine, yet they do not want, and are equally as well nourished by the Divine Bounty as the rest be. Though they want Wood, yet have they Pit-Coals; for the Earth there is very sulphureous, and at the Mountain* Hekla *it burns perpetually, and casts out fire, smoak, and ashes, and yields to the Inhabitants a great quantity of Brimstone, which they dig out and sell to our Country Mariners and Traffiquers, thereby sustaining themselves.*

Some one or other may object to me and say, Seeing that Salt-petre *is to be accompted of as an* Universal Subject*, and to be found in all things, it must necessarily be, that seeing* Island *has no Wood at all, the* Salt-petre *is to be found in the dry Stock-fish, for otherwise this Salt can't be said to be* Universal*, as being not to be found in such or such a Country.*

Well then, to clear this doubt, I do affirm, (as I said before) that Nitre is in Fishes also, though not in such plenty as in other subjects, viz. *in Wine, Wood, and Corn: But it is found far more plentifully and potently in Stones, with which those Countries are well stored; and any one may easily guess what Riches they would produce, were they but versed in the knowledge how to extract it; for in Stones which by burning are turned into Lime, (the which may be done without Wood, even by dried Turf or Pit-coal, and that easily) Nitre is as abundantly hidden, as in Wood, and in other Vegetables:*

Nor is there ought else requisite, save the knowledge of the way of its extraction.

If therefore that harsh and wild kind of Country, wherein nothing grows, be put in the Philosophical balance, with the most rich Country, it would (seeing it contains hidden in its Earth and Stones such great Treasures) easily exceed it, and obtain the chiefest place. There is therefore no reason why any one should complain before God: A small man doth usually exceed, as to swiftness and agility, one that is big and tall: A weak man may oppose the acuteness of his wit against the strength of the lusty: A poor man enjoys Quietude, and patiently undergoes his more hard fortunes; but contrariwise, the rich is invironed with cares. And this may be also understood of other living Creatures. These things being well considered, every one may understand and perceive, that God hath satisfied every one, and that there is no Creature that can justly complain.

It is reported of the Peruvian *part of* America*, That it is enriched with the most abounding Silvery Mountain* Potosi*, seated in a part of that Region, and is about some 50* German *miles in compass, and that it doth by its exceeding cold Air hinder the growing of any Vegetables, and yet notwithstanding, there is such a notable power and excellency obtained by the Riches of that place, that the City there founded doth abound with the best Wine, Corn, Sugar, and other such-like necessary things, and is scarce inferiour in bigness and fair Buildings to any City of* Germany*, and from this very Mountain only receiveth it this felicity. It is hence evident, that all such things are not unprofitable, which (by reason of the meanness of the outward shape) are not so well known to every body; for sometimes a Countryman throws a Stone at a Cow, which is far more worth than the price of the Cow is, and yet it is*

contemned, because unknown.

The external and superficial Figure therefore of a thing is not alwaies to be regarded, but its inward parts are to be search'd into and viewed; and that we may attain hereunto, Alchymy *points out to us the way, (she being the Instrument of the true praise-worthy Philosophy) and opens the Gate, whereby we may search into the inmost bowels of every thing.*

He who well knows the fire, and the use thereof, will not be distressed with want. And he that has no knowledge of the same, neither will he throughly search into Natures Treasures: From these things it is evident what Treasures we Germans *do unknowingly possess, and yet convert them nor to our use; And were not foreign parts as ignorant too of these things as we our selves are, they would readily have upbraided us* Germans*, that we spend more time in eating and drinking, than on good* Arts *and* Sciences.

Now as concerning my writings about the concentration of Wine*,* Corn*, and* Wood*, and the condensation of 'em, I shall never be better able to prove and confirm the Truth of the same, than by producing it to manifest light, that so the Eyes seeing it, all admiration may cease, and all incredulity vanish. There is credit therefore to be given to all the things mentioned in this Book, as to an experienced Truth, and which are not made publick for any other ends, save only that those natural Sciences may tend to the utility and benefit of my Neighbour. Whoever therefore shall believe them, will purchase Honour and Profit; and contrariwise, he that will not believe, will get only disgrace and detriment.*

I will therefore predict or foretell, that this one only Artifice of making Salt petre *in such great plenty, and the way of using it to metalline works, will bring*

incredible Treasures to our Country of Germany*, if we be not too negligent, or let it slip by a sluggish slothful drowsiness. I do verily believe, that if God doth yet vouchsafe me one years life, that this said Artifice of* Salt-petre *will be profitable to very many; but if so be that it shall not please the Divine Majesty to prolong my life so short a time, it may however be accounted of, that God hath indeed shewed us* Germans*, as heretofore he did to* Moses*, the* Land of Promise*, but hath, by reason of our sins and incredulity, shut up the passage against us.*

But that I may absolutely serve my Neighbour, and that he may have no cause to complain, as if I had served him but by halves, in that I have not described the Press for Wood, together with the appertaining Instruments, I do now therefore certifie every one, that all the things necessary and requisite for the concentrating of Wine, Corn, and Wood, are to be seen in my custody in perfection.

If now any one be desirous of receiving benefit from his Wine, Corn, or Wood, and that he find it highly to concern him to get this knowledge he will well know, by the inspection of the Work presented afore him, wherein lay the defect as to the getting this thing, and what means the said defect is to be holpen by; but the Instruments that I have mentioned, shall be no longer to be seen, than from the Calends of March *to the Calends of* September*, this present year 1656.* viz. *six months time; for I have purposed to my self, not to render my life burdensome alwaies unto my self, by carrying such troublesome burthens about to and fro, but at last to get a quiet seat and abode. So then it will, by this here spoken, be evidently manifest to every one, what he is to do as touching this matter.*

The three other Parts concerning the concentration of

Minerals and Metals, shall (if God permit) shortly also follow.

But because Nitre is the alone Instrument of that work, and that no body can get any eminent profit, unless he can have Nitre at a very cheap rate, it is wholly necessary that some labour be bestowed about the procuring it, which if you can get good store of cheap, then will the hoped-for profit be perceived, both out of Minerals and Metals: If not, vain will it be for you to make your search into that Mineral kingdom.

Well, I do affirm, That by the benefit of Nitre, things wonderful may be effected in Metallick Labours; yea, ten times more than what I have described in my small Treatise, called Miraculum Mundi*, or dare to describe for the future; for all things requisite to true* Alchymy*, may be perfectly accomplished in it, by it, and with it.*

Herewith I conclude this Preface. Whatsoever is here wanting in this Treatise, for brevities sake, the demonstration visibly exposed to view, will afterwards compleatly recompence, insomuch that any one will easily wind himself out of all doubts. And here we rest for this time.

THE FIRST PART

OF

The Prosperity of Germany,

&c.

In the Name of the most Holy Trinity do I begin to describe the most great Wonders of God, that I may manifest to everyone (without concealing ought) His Grace and Mercy, which He embraceth Mankind

withal; and I pray God, the Father of us all, the merciful Creator of Heaven and Earth, to guide and direct this Work, that it may serve to His Divine Honour, and tend to all our welfares. *Amen.*

We will enter into *Franconia*, and see what a wealthy and large Benediction of God is to be found therein: And I will first begin with Wine, none of the least of the most noble Creatures of God, and will demonstrate how ungrateful we shew ourselves to the bestower of all good things, and how basely we abuse His Goodness.

Every one knows what a noble Creature wine is, how strained from the Grape and made, and therefore this thing needs no further description, forasmuch as others have heretofore sufficiently enough done this task and daily Experience is an abundant testifier of the use of the same. It is behoveful here, that we only signifie how it ought to be handled better than it has hitherto been, and may so likewise bring a greater profit and utility to the tillers thereof than hitherto. Every one knows, that wine is the noblest amongst all drinks, and most conducive to health, and may and ought to be called the Purest drink: It cherisheth old men, and heats the cold, but such as are of a tender age, should deservedly shun wine, because being drunk too soon, it easily inflames the Liver, and dries it up, and stirs up various Diseases, and at last causeth Death it self. So then, there is nothing so good, but may also do hurt, nor is any thing so evil, but doth sometimes bring some benefit, according as the difference of the use is which it is applied unto; as is here evident in Wine; the which being drunk moderately, and at due seasons, doth not only excellently well digest and concoct the Meat in the Stomach, but likewise

evidently strengthens the Heart, Brain, and Vital Spirits, and generates pure and sound Blood and Flesh. Contrariwise, being immoderately taken, it overflows as 'twere the Stomach, Lungs, and Liver, fills those Vessels with many evil humours, and obstructs them, so that they cannot well perform that office whereto they are destinated by *GOD* and *Nature*, but are overwhelmed with whole Troops of Diseases; for the Heart and Brain is set upon by their spiritual efficacy and hot nature and property, and is weakened, and the vital spirit is overcome and suffocated, as we see in the fire, the which when greater doth alwaies suppress and overcome the lesser.

Hence it comes to pass, that men that load themselves with daily drinkings, do little differ from new-born Calves and Geese, and are wont to be neither profitable to God, nor to Men, nor to themselves.

In the Name of God, therefore we will proceed on in the matter we have proposed, and see by what means more profit may be reaped from Wine than hath hitherto been.

In the first place, he that aims at the bettering of any thing, must know what the thing is which he studies the amending of, and of what parts it consisteth.

Therefore, as concerning Wine, it consisteth as well as the other Vegetables of three principles, *viz.* of *Salt*, *Sulphur*, and *Mercury* (that I may use the Philosophers terms). The *Mercury* is its insipid moisture, and the *Sulphur* is that burning Spirit which is extracted or drawn out thereof. You shall

thus know the thing, by this following Experiment. Put a Cucurbit full of Wine in a B. and with a gentle heat draw off what will come, but yet so, that the parts which in the destillation alter or change themselves, be each of them received apart in its peculiar Receiver. For example; If there were 12 parts of wine, or 12 measures, there ascends first only one part of spirit, which is the soul and life of the wine; after it, come ten parts or measures of insipid water; the remainder in the bottom of the Glass is a thick and austere or harsh matter, which being the Tartar or Salt of the wine, is also almost one part or measure of the wine. Of these three parts all wine is compounded, but yet partakes of one or the other of the Principles, more or less, according to its being more or less mature, or its growing in such or such a place. As for example;

The Austere Wine hath alwaies more Tartar and less Spirit than the Ripe Wines; and contrarily, the ripe wine doth abound with more Spirit than Tartar, as the *Spanish* and other extraneous wines witness, which do alwaies abide sweet, and plainly have no Tartar in them; the reason is this, Because in those warm Countries they are brought by the Sun to meer sweetness, and so are ripe; so that the austere Tartar or Salt is throughly changed, and concocted into a sweet Sugar. Hence it comes, that the said wines do not in the afore-proposed Examen leave any austereness, as our wines in *Germany* do, but rather yield twice as much spirit, and scarce the half part of insipid water: Whenas austere Wine yields about a twentieth part of spirit, the ripe *German* wine yields almost a twelfth part, and the *Spanish* a sixth part of spirit, four parts of water, and one part of fæces without Tartar. So that from good *German* wine there comes (as I said afore) one part of spirit, ten of

water, and one part of austere or sowrish matter.

He that knows these things, will easily contrive and prepare for himself by the help thereof, at all times, be it hot or cold, good and constant, or durable wine. Neither is there any room left a man here of complaining, as if God shewed greater bounty to men one year than another. The fault of this defect is not to be imputed to God, but to our own selves, who know nothing, nor are willing to know, nor study how to help Nature; for Art can bring an assistance and help to Nature when she is impeded in her work, and is unable to bring her Fruits unto a maturity, provided the Artist removes away that which the wine naturally abounds withal, and addeth thereunto what it is destitute of.

For example, Let us examin a thin wine, which being not sufficiently concocted and ripened by the Sun, is endowed with too much sharpishness and water, and contrarily has but little of spirit; if now to such a wine, when it begins to boil or ferment, some spirit shall be added, so that it may work together with it, it will be even as well ripened in the wine-vessel, by the benefit of this fiery spirit, as if it had been ripened by the Sun, as it hung upon the Vine; insomuch, that by this means there mought be made excellent wines every year, if any had but the knowledge of thus helping them.

NB. But now such a spirit must not be such an one as that common Adult or Brandy-wine is, but a grateful and pure Essence of wine; the manner of making it I have described in my *Vegetable Work*. Now by how much the more this Spirit shall ferment or work with such a wine, so much the stronger and more efficacious doth the wine become: Forasmuch as all the Virtues of all the whole wine consist in the

Spirit only, and the Tartar or Salt doth by its muchness make it austere and sharp. But *Musts* being by such an Artifice made stronger and more efficacious, do keep a longer time afterwards without corrupting, and may be carried or transported whithersoever one please; whence it comes to pass, that they are never spoiled, as they are otherwise usually wont to be, when 'tis not of ripe growth.

From these things 'tis evident, that out of one Must, grown in one and the same *Autumn*, there may with ease be made wines of 3, 4, or more kinds, according as there is more or less of this spirit added to the *Must* and fermented with it.

There is also another way, by the help whereof every austere wine is easily corrected and amended, thus: In the Vintage time, let the liquor of the *Must*, or of the expressed juice of the Grapes, be so boiled in peculiar Vessels, that the unprofitable moisture or tasteless water do exhale by little and little, until thou hast as much as thou wouldst, or as the efficacy of the wine, or the degree thou wouldst by correcting reduce it to, shall require: For, in the exhalation of the superfluous moisture nothing goes away, save that insipid water; but the sweetness and the austereness remains in that thick and condensate juice, like to Honey; so that that boiled mash comprehends all the strength and virtues of the wine, concentrated as it were, and condensate, and will again disclose them, if it doth again work, with water thereto added in a due proportion; but the use of this condensate *Must*, which as yet hath not wrought or fermented, is this, That it can be at all times carried, and most profitably sold in far remote Countries, which thing could not afore be done.

For every one knows, that when there is a cold

Summer, Wines become immature and acid, and are not wont to keep; for as soon as they come to be a year old, they are covered over with a filmy skin, and being mouldy, corrupt, because they have not in them spirit enough. From whence it comes to pass, that many times Vintners, or Vineyard-keepers, suffer great loss, after that they have diligently betook themselves to dress the Vineyards for an whole year, and have lived sparingly and hardly, and working hard, have sustained their lives with Bread and Water, hoping that upon selling their wine they should scrape together a little Money, to buy them some Clothes and other Necessaries for their Family's supportation; for the expected plenty of the wine hoped for, and of the profit accruing by the store of Money for it, when sold, hath prop'd them up with this hope; but now the wine fading and deluding their hopes, and turning into an acid and austere taste, they cannot sell it, seeing 'tis scarce worth the carriage; or if it be sold, 'tis at such a mean rate, as scarcely sufficeth to discharge the Cost of dressing it; and what shall now be done for Food, Drink, Raiment, and other Necessaries to sustain the Family?

And yet the Vines must be dressed for the next year too, and more Monies laid out upon them; but from whence shall Monies come for Food and Raiment, in the mean time? Alas, what course will they take if some such-like years should follow one another together? Either the poor miserable men must, together with their Wives and Children, famish, or else turn Souldiers, and be kill'd, or be made so desperate, as to betake themselves to thieving and robbing, and so finish their daies by an Halter: For the present world is so much estrangd

from Mercy, that one will not use so *much* Christian Charity, as to help another in his necessity.

And besides, the ingratitude it self of men doth sometimes make others slow and fearful of administring and affording a mutual help; forasmuch as very many, when they are rid out of their incumbrances, do refuse to restore those things, or by labour to requite or make amends for the things by which they were delivered out of their Straits.

Hence it comes to pass, that he who does a friendly good turn, for such an ingrateful man, loseth his Money, and by reason of that so ill placed formerly, abhors the lending his helping hand again.

Now, that such great inconveniences may be removed, and the Vine-dressers somewhat holpen, so as that they might every year sell their wines at a beneficial price, and may never be oppressed with that foresaid detriment; it may very conveniently be done by the help of this concentration or condensation, by evaporating the *Must* to the consistence of Honey, the which may profitably be carried into far distant places, in which no wine is accustomed to grow, and be there sold. Such now as buy up such Must thus condensated by boiling, do now know how by dilating it with Water, to reduce it again into good wines. This Artifice therefore being so laudable, will be helpful to both, to the Vine-dresser, in yielding him presently ready Money for his Must, and to the Merchant, in easilier furnishing him with Wine, and quitting him of so much Charges in the Carriage.

But that the business may be yet the better and more clearly understood, let us see by making computation, what the benefit and profit of this condensation is.

Let us suppose then, that a Wine not ripe remains acid and weak, and that a *Franconian* Urn, or half an Hogshead of *Frankfort* measure, yields scarce a Florin, or a Doller at the utmost. Such a Wine as this will not quit the Costs of the Carriage, though but for 12 miles; [*a* German *mile is three of ours*.] for it degenerates by the carrying it, and becomes mouldyish, as 'twere, and turns sowre, so that the Huckster can't sell the same, and he'l have a care how he buys such wines another time; and the Vineyard-keeper is even enforced to keep them to his great loss, forasmuch as all his safety or dependance is built thereupon.

As for the Rich men, tho' they have some acid wine, they are not undone by the loss, for they have still by them other better wines, which they mix those worser and more acid wines withal, and so sell them off; or else they keep such thin wines till the Autumn comes, with more plentiful and riper Grapes, and to the Must proceeding from them, do they pour this thin Wine, and let it work therewith anew, and by this means it becomes vendible. But yet the Gain arising hencefrom, is sufficiently poor and mean: For by how much the thinner the acid wine is than it ought to have been, tho' it be mixt with good Wine, yet doth this become so much the worser; nay, it sometimes happens, that both are corrupted and lost; for as much of help as the acid Wine gets from the good wine, so much of goodness doth depart even from the good wine. So that such a kind of bettering after what manner soever it be instituted, cannot be very profitable or advantageous.

For example, that I may be the better understood, let us instance in two pieces of Gold, each of which should be the value of 25 Imperials: Let them be put

in the Balance and examined, and being examined, let one of them be the due weight, and let the other be less in weight or price the value of four Imperials. If now you are minded to take so much away from that piece which is of current weight, as to make them both of alike weight, you may indeed so do, but yet you are no waies benefited thereby, but rather suffer loss: Forasmuch as you took away from that piece that was of due weight, and added unto the other piece that wanted of weight, so much of its value is departed, and both pieces will be unfit to go in payment, as wanting their due value and weight. What profit therefore can hence redound unto any man? Even so is the case with the Wine, for if one should get some two load of wine, and could sell one of them for 20, and the other but for 10 Imperials, and yet should not be accounted of as vendible Wine, and now the Merchant should mix that thin wine with the better, that they may both be equal, would not that better wine become worse, and that thin wine be rendered not much the better? For my part therefore, I cannot see that such a kind of meliorating can bring much profit.

But as for my bettering and correction, it is always profitable, whereby the acid wines are not corrupted by the acid, but the good and superfluous humidity only is separated by the benefit of Art, and the good part being condensate in it self, and by it self is reduced into a narrower compass.

NB. He that is so minded, may separate from the sweet Must, a fourth part only, or a fifth or sixth part, by evaporation, and presently bring it to such a pass, as to work or ferment; for they become so much the better, by how much the more water hath been consumed by evaporation: If the Quintessence of

wine be added to that working Must, the wines become the better, and the more generous. This kind of way may be made use of in those places in which the wine doth for the most part remain acid; for there needs not this Art to those Vines that Nature hath ripened.

Besides, the wines may be condensated to the thickness of Honey, that they may be thereby rendered the fitter for Transportation. Six Hogsheads, or *Oma*, of Must, may be so condensated, that one Hogshead will hold them; the which (if need be) may again by the apposition of 5 Hogsheads of water, which quantity it lost in the condensation, make 6 Hogsheads of wine of the very same goodness and efficacy as it would have been of before the condensation, if it never had been condensated, but been presently put out of the Press into the Barrels, to have fermented and work'd into wine after the usual manner.

NB. But now if any be desirous of making his wine better and more noble than it would have been afore the Concentration, then he must not put five, but only 4 parts of water; for should he add but three Hogsheads or parts, it would be yet better and nobler by one degree than the others: Hence is it manifest, That it is in the hands of the Artist to make and alter these wines at his pleasure, and to render them strong, stronger, and middling, and by the addition of water to give them even what efficacy and what virtues you list. But now, to all the mixtures he may add the soul of wine, if he has it, that the wines may thereby be the sooner clear and pure. For the Quintessence of any wine being conjoined with new Musts, and working with them, brings them in a short space of time to clarity and purity, so that they

become transparent, but principally when they are tartarized, or full of Tartar, for the spirit of Wine brooks not any Tartar, but precipitates it in the fermentation to the bottom, or drives it away from it self, and so by consequence makes the Wine clear and transparent. But as concerning, what means the Tartarized (Spirit or) Essence of Wine is to be artificially prepared by, 'tis needless to repeat here, forasmuch as it is already described in divers of my Writings hitherto published, but especially in the Vegetable Work.

Besides, it is not so convenient, that every one should know, by what means the concentrated Musts may be prepared with water, and the Tartarized Quintessence. It is sufficient in this place, to know how the Musts are to be concentrated, or brought into a narrow compass, that so they may be transported and sold. Let this be the care of the Merchants to know how to use them when they have bought them. For the Brains of the Vineyard keepers are incapable of these things. Yet nevertheless, there will be some Men who will know how to make a due use of such boiled and condensed Musts, if they can but get them, and every one may be Master of this Affair, if he has but Coppers and Kettles, necessary for such an Operation; whereby he may make store enough of Juice. But yet every Countryman can't get such Kettles, neither will it be worth while, forasmuch as a small Portion of Wine, will not be able to quit the Costs. But whosoever bestows his Study and Moneys in exercising this Artifice, will reap thence from a great deal of Utility and Advantage. But whether he does these things, or does them not, he neither benefits, nor injures me. 'Tis sufficient, that I have evidently demonstrated to the Vineyard Masters, by what means they may always

sell their Wines, whether they be ripe, or have come short of their Maturity.

But for the better instruction of the Courteous Reader, I will compute the Charges of this Operation, and show, what gain is to be expected from the Condensation of these Musts.

In the first place therefore, let us buy some Musts in those places, in which they are thin, and are sold for a mean price, *viz.* twelve Urnes, or six Hogsheads, or Oma's, for *xij.* Imperials; [an Imperial is about 4 *s.* 6 *d.*] this Must we will condense to the Consistency of Honey, so that there may be but one Hogshead, or Oma remaining. Let the Costs requisite to this Concentration (always provided you are furnished with the Copper Vessel) be valued at half a Dollar, or thereabouts; and the charge of the Wood we'll count an Imperial for. The Wine Cask which is to be filled with this condensate Juice, we will value at half an Imperial, its carriage forty Miles, we'll reckon six Imperials for. All which Charges being summed up, make nineteen Imperials and an half. And so much will be the Charges of one Hogshead, or one Oma of this Condensate Must, and its Carriage forty Miles. This Must now being brought into such a place where Wines are dear, you may at any time of the year, by the addition of Water, and by Fermentation, transmute into good Wine. And that one only Hogshead being the condensate Juice of six Hogsheads of Must, will yield thee so many Hogsheads of such Wine as the Must would have been afore its Concentration. And if thou desirest to have thy Wine stronger and nobler, than as it comes out of the Press, and than it could be afore this Condensation, you may omit the putting thereunto so much water as it lost in the Condensation, and lessen

it proportionably, that so those six may make no more than four Hogsheads, and they will be the more generous; the which thou shalt far better have by this means, if *viz.* You know how thereunto to adjoin a Quintessence.

If now, that one Hogshead of juice, which afore its Condensation was six Hogsheads, doth again yield four [and no more] it must of necessity be much better, and more noble than otherwise it would have been, had it been made after a Natural manner, (*viz.* just as it came from the Press.) And by this means too, it will last the better, and may be the easilier transported and sold.

So then, if in such a place as is 40 Miles distant from Wine-making Countrys, an Hogshead, or Oma, is sold but for twelve Imperials, and you have of six Hogsheads of thin Wine, made four of better, and each of these you sell for but 12 Imperials, yet you shall have 48 Imperials, out of which substract your 19 and ½ Charges, you shall have clear Gains 28 Imperials, and ½. But I have set a most low price on this Wine, for in such places which are about some 40 Miles from those Countries, in which abundance of Wines grow, an Hogshead, or an Oma, is not usually sold at the Rate of 12, but of 24 Imperials. The gain therefore of about a Wayn-load of such a thin Wine, which haply would have corrupted with lying, and never yielded any profit, doth at the least yield above fifty Imperials.

Every one now may easily see how much Gains this Artifice of the Concentration of Musts doth bring. For besides this Commodity arising from this Labour, *viz.* That the Musts being presently sold, yield ready Money; there is this also, that the Money being again presently disburst, opens the way for the

next years profit. The Merchant also has this benefit by this Labour, that he is not enforced to pay so much Water's carriage so long a Journey; and that he may even at his pleasure make his Wine more or less strong and efficacious; for what a deal of profit is this, for to have all the Wine of six Hogsheads, carried in one Hogshead.

Besides, the Merchant doth not only gain the price of the carriage of those five Hogsheads, but also is quitted of the fear of the Carter's corrupting, or spoiling that Juice by the way, as is usual with them to do with Wine, drawing it out, and filling up the Vessels again with Water. This danger these Juices are not subject unto; and may be kept in great plenty in fruitful years of Wine, until you need them. For they are not wont to be corrupted, if they are but kept in pure, and well shut Vessels. By this means every Vintner may in such exceeding plentiful years, furnish himself with a great Treasure, and store of Wines, and so afterwards, when a dear year comes, reduce his Juices into Wine, and enjoy a great deal of profit.

I have to this end described this so famous an Art, that the common Vine-Masters, may have present sale for their Musts, and not be enforced so long to keep them, till some Carrier comes and enquires after Wine, but may presently get their Moneys, and may profit themselves by bestowing them to the use of their Family. So then, it fares not only well, which the Vine-Masters, and the Merchants, but also with all such as dwell in those places which yield no Wine, because by the benefit of this Medium (or Artifice) they may also drink Wine at a cheaper rate. For if any Honest Citizen provides himself with an whole Hogshead, or half an Hogshead of this Juice,

he may turn it into stronger, and weaker Wines, and all times of the Year make new, and as yet fermenting sweet Musts, whensoever he pleaseth, and as oft as his need requires; and may by the apposition of Spices, or Herbs, make Aromatical, or Physical Wines; which thing cannot be effected without these Condensate Juices; forasmuch as Sweet *Musts*, cannot be carried by Land to any other place, for that they presently ferment, and boil up, and will either break out of the Vessels, or rend the Cask, and be lost, which (by having these Juices) is not at all to be feared. I do therefore think that I deserve exceedingly well of very many, by the faithful manifestation of this Artifice; which deed of mine, whether it be praised, or dispraised, yet will it not be despised by such men as shall apprehend, and perceive the benefit and Commodity of so great an Artifice.

It remains now, that we also describe, and set afore your Eyes the Instruments and Vessels serving to this Condensation, (without which, this Concentration cannot be effected) and withal shew the manner of proceeding, which is to be thus ordered.

In the First place, provide a Copper of such a bigness as you shall judge needful for the great, or less quantity of Juice you have; let it have a plain and even bottom, and let it have the sides about a Span high, and get it well Tinned over in the inside, and not Leaded, the which Vessel you must put in a Furnace of a sizeable bigness, and so order it, that being set in the Furnace, the Flame may come but only to the bottom, and not be able to touch the sides. The Walls of the Furnace are to be some two foot high, and must have an Iron front, or Stone

Door, serving for the putting in the Wood, and registring the fire, by opening and shutting it. At the backside is to be an hole of such a bigness, as may suffice for making the fire burn by the access of the Air, and for carrying away the Smoke and Flame. But it must be so ordered, as to be covered with a broad stone, if need be, that so the fire may on such wise be registred, that the Juices may not boil over by the overmuch fire, or taste of burning. These Juices are to be so long boiled with the wood, until they begin to wax thick, and then more new Must is to be thereunto added, this addition is to be so long made, and so often repeated, until the Copper be almost filled with those thick Juices. Then the holes of the Furnace that serve for giving air, are to be shut both above and below, that there may be no flame under the Copper, but the bare *heat* of the fire, and a sweet and gentle warmth, which will bring the Juices by a sweet decoction to the consistence of Honey, and will condense them without any adustion, insomuch that they will become as sweet as Sugar.

These Juices, you may let out by a Pipe, or Cock placed near the bottom of the Vessel, and shutting it again, pour in more to be condensed after the same manner, until all the Musts are condensed, but you must not presently put the Condensate Juices, as soon as ever they come hot out of your Copper, into your Barrels, but let them run first into some wooden Vessel, and be there left so long till they are cool, then put them up in your Barrels, and shut them up tight, and so may you keep them whole and sound, and free from Corruption, even as long as you list: For if you should put them hot into your Barrels, and so shut them up, the Barrels would burst, or else when you open them, would (by reason of the pent-up Vapours, which can have no exhalation) break or

run out.

NB. And here comes a notable Secret, which I think good to add. When the Juices have rested some two or three weeks, and be afterwards dissolved with warm water, the residue of the Tartar which would have made the wines acid, will fall down undissolved to the bottom, in the form of small and big Crystals, and being washed with common water, may be used instead of Tartar forasmuch as it is nothing else than a meer absolute Tartar. Now this separation of the Tartar, is of great concernment as to the Wine, for it thereby becomes much better than if those Crystals had remained dissolved with it. Nor is any thing lost by this means, for that the Tartar is of as much value as the Juices: And besides, the Wines will be by this means freed from their acidity, and rendred better and sweeter; which thing verily deserves to be esteemed of as a great and profitable Artifice; and which, many there are that will know to use it to their great profit.

Verily, he that is of so dull an Apprehension, as not to be capable of understanding these things, that are so clearly, and evidently manifested, will not be any whit the better by larger Discourses. But he that has a desire of setting about this work, will insinuate, or work himself by a farther Meditation into the inmost centrality as 'twere of this so great an Artifice, and will with a far juster mind bear with me, in that I have not so much time at present, as to use a more prolix, or larger Stile.

But if so be, any do desire to have this Artifice declared unto him, by a more clear delivery, let him read my Explication of the Appendix adjoined to my Fifth part of the Philosophical Furnaces; as also the Vegetable work, and there he shall find more such

Artifices. Or if haply it concerns him, he may see in my Laboratory, the Furnaces and Coppers requisite to such a work, together with the Manual Operations.

I am even constrained briefly, and as it were by the bye, to insert thus much, that if some more than usually unskilful Men cannot understand those things which I have declared concerning the three Principles, *viz.* That all Wine must needs consist of the same, to wit, Salt, Water, and Spirit; I dare boldly and confidently averr, that he who knows how to conjoin (according to art) these three Principles, may every where make good Wine.

NB. But yet I would not have such an one perswade himself that he can do any good, if he mixeth Tartar, Water, and Spirit of Wine together, no, no, that is not the way for him to be Master of his desire. There are far other-guise Manual Operations, requisite to this Artifice, and such as I think it inexpedient to manifest in this place. Let every one be content with the things at present shown him, haply God will sometime or other bestow (on him) better.

CHAP. II.

Treateth of Corn: Shewing what means it is to be Concentred, and Condensated by, so as to be Exported in great Quantities into other Countries, whereby both Gain and Moneys may be thereof made.

I have instructed you in the foregoing Chapter, after what manner such Wines as are of a mean price, may by the help of Concentration be conveniently

transported out of one Country into others more remote, where no Wines grow, and produce good profit. The which Artifice may be of most great benefit to the Inhabitants of such Countries as abound in Wine, and want sometimes Chapmen or Merchants for the same.

'Tis very well known to every one, that in most places of *Germany* (but especially in *Franconia*, and in the other Countries adjoining) Corn is so exceedingly plenty, and of so vile a price, that the inhabitants know not what to do therewith; and for that reason it lies and rots in their Barns and Granaries, the exceeding abundance thereof either hindring the sale of the same, or the great costs and charges of Carriage hinder the Transportation of it into the lower Countries of *Germany*, where 'tis dear enough.

Hence comes it to pass, that the miserable Inhabitants have indeed Wine and Corn enough, but want Moneys to pay the Tributes due to the Magistrate; so that tho' they have such plenty of the Divine Gifts, and so much Riches, yet for all that they are in great penury and want, in that they cannot sell off so much as to pay their Family's expence, *viz.* Men-servants and Maid-servants wages, or so much as to sustain them. Verily, this is a punishment from the hand of God, and a singular one too, by which he corrects us ungrateful men. In time of the Wars, when a huge Scarcity pinched the Inhabitants of *Germany*, then the common outcry went up to Heaven, and promised largely an amendment of life; but when the War was over, and all quiet, and a most wisht-for Peace returning, then all men generally became worser, and more wicked, tho' the goodness and bounty of God had bestowed on them

such a great plenty of things so exceeding necessary: And now such great Fulness being enjoyed, they now gape after Money too, and murmur against God, as the *Israelites* did, who loathing, as 'twere, the plentiful abundance of things necessary, murmured at *Moses*.

The reason why Corn is so exceeding plenty, is this:

After the making of Peace, and sending away the Souldiers, many Commanders being weary of warfare, and abounding with Money and Horses, bought (or rather squeez'd out) of the poor Inhabitants, every where destitute of Money, most notable Farms, for a very mean price, and did set themselves with the utmost of their Industry to till the Earth, which had lain fallow a long time; which Lands became so fruitful that it even amazed all men. The poor Inhabitants too, who now had gotten a little Money, they also set their hands to the Plough, and used even the utmost of their endeavours in the tillage of the Earth: From hence it came to pass, that they were so furnished with such a vast deal of Corn in a few years space, that they knew not at all what to do therewith. As for carrying it into far distant Countries, the troublesomeness and charges of the Carriage were too great an hindrance: To lay it up in the Granaries, that the Air will not suffer them to do, tho' in the time of *Joseph* such a thing was done in *Egypt*, where the Air being Nitrous, dry, and not so easily subject to corrupting, as ours is, preserved the Corn from Corruption.

What I have here written, hath proceeded forth from a good mind and sincere intention, and I hope 'twill do more good than hurt. I know that the eyes of many will be opened to see what a *Babylonish*

Confusion the present World is in; I pray God to be an helper to the Good, and to be a reducer of the Wicked from the course of their Impiety, into the Right way.

The Process of Concentrating Corn is this:

In the first place, you are to make a Malt of your Barly, Wheat, Oats, Spelt, or any other kind of Grain or Corn, the which dry either in the Sun or in the Air, or else in an Oven heated a little, and not to be scorched and parched as it were after the Brewers custom; for so the sharp fume of the wood would stick thereunto, and make it black and bitter, and it may easily be conjectured, that there would be no good come of it, for by this means the smoak of the wood would stick on to the Corn and the Sprouts it has thrust forth, and are moistened, and so would make the Ale that is boil'd thereoutof unwholsome, and of an ungrateful bitter flavour: But now such Malt as is dried in the Air, Sun, or in a warm Stove or Oven, has no such ungrateful taste as comes from the smoak of the wood, but remains sweet and pleasant.

NB. Else you may do thus; The Corn, after it hath sprouted and hath been thrown abroad on some Floor, open to the air, and thereby been a little freed of some of its moisture, may be dried purely and quickly too in the Brewers great Coppers, in which they are wont to boil their Ale or Beer, provided it be continually stirred about with some wooden stick without ceasing, that it may be all over hot, and so become dry. But yet you must have a care that your fire be not too strong under your Copper wherein you dry your Malt, and so burn the Corn, and make it taste untowardly; this done, the dried Malt is to be

ground as other Malt which is used to make Ale withal is wont to be, but yet so, that it be not too finely ground nor too grosly; for if it be too gross, and the Grains be unbroken, the water cannot sufficiently get out the Virtues and Juice in the boiling, but that the best part will remain in the boiled Grains, and so be thrown away on the Beasts in their nutriment; but if it be ground too small, it will run into heaps, and hinder the straining out of the Ale; therefore a mean is to be observed, and care taken that no errour be committed, by either excess or defect. The Malt being on this wise prepared, every one may boil his Ale according to his custom, and so much thereof as his Vessels, Coppers, and Coolers will admit of: Some do pour boiling water on their Malt, and mix them both by stirring them well together, and then let them settle for some time that the water may take into it self the strength of the same; then they draw out that water by a Tap, and pour on more, and repeat the Infusions so often, until the water can get out no more sweetness, and there remain nothing but the insipid Husks, the which are nourishment for Cattel.

NB. Othersome that have no Vessels to extract the Virtue out of the Malt in, by boiling water, do put the prepared Malt in wooden Vessels or Tubs, and pour thereon warm water or cold, and stir it very well about, and leave it so for some hours, that the Malt may be macerated; then do they put it in a Copper, and pour thereunto so much water as may keep the Malt from burning to in the boiling; and having boiled it for half an hour, they pour it out upon a bed of straw, fitted for that purpose, and placed over a Cooler, and so strain the Ale: This Labour of pouring on, boiling, and straining, is so oft repeated, till the water sucks no more sweetness out

of the malt. This manner of boiling Ale is used by those only who want store of Vessels, and pretty large ones: The former way is not only better and more commodious, but likewise more fit for the boiling of a greater quantity of Ale.

NB. This is to be observed in this place, when the best and first Juice or Extraction is drawn out of the Vessel by a Tap, and fresh boiling water poured a second time on the malt in the Copper, and again drawn off by the Tap, those two waters in which the chiefest Virtue of the malt is, may be boiled and thickened by little and little in a plain or flat Copper. The third and fourth pouring on are indeed as yet good, but yet not fat enough, and seeing they are not very strong, are not worth the boiling away, for they won't quit the costs of the Fire, and therefore are to be applied to some other uses. Now when a man is about this work, he may so order his boilings, as to have several of them one after another; and then those pourings on, *viz.* the second and third, remaining of the first course of boiling may be poured on the second course of boiling, in the stead of bare water: And so is it to be handled, that alwaies the first and second pouring on (and which contain in them the chiefest Virtues of the malt) may be boiled to the consistency of Honey in a Copper made for that purpose, of Evaporation; and the third and fourth pouring on may be alwaies kept for the next following course of boiling, and be poured on the malt in the room of bare water, and so are to be condensed by evaporation in a Copper, as the first and second pouring on were done withal in the first course of the boiling; and so always the *3d.* and *4th.* pouring on of the former course of boiling, is to be the first and second in the next following course of

boiling; and this way of proceeding draws out of the malt its best and chiefest Virtues, and lessens the charge of the boiling: For the Costs would be far greater, if the third and fourth pouring on were to be boiled off *per se*.

NB. The Coppers and Pans necessary for the thus reducing these extracted Juices to the consistency of Honey, are already described, where mention is made of the Concentration of Wines. He that can't well enough understand me, may take the pains to come and see my Furnaces, Coppers, and other Instruments appertaining to this work; as likewise the manual Operation, for I cannot help him any other way. And as for a larger description of these things, my time will not permit me at this instant to make it. The Juices being condensate, are to be drawn out of the Copper by a Tap fastened therein, or laved out, and being cool, put them up in Barrels, and shut them up tight, that the external air may not get thereinto; for thus may you keep them uncorrupt, even as long as you please.

NB. In your boiling them you must be very diligent that the Juices be not burnt to, by the overmuchness of your Fire, or that by being heat too hot, they boil not over; all which may be prevented by Registers (as the *Chymists* call them) destinated for the regulating of the Fire. This is a most compendious way of extracting the Virtues out of Corn, and of reducing them into a narrow room, the which if you order according to Art, that nothing of your Juices be spilt or lost, 8 Barrels of Malt will yield you one full of Juice, and which contains all the Virtues that were in those eight Barrels; the residue serves to fatten Beasts withal.

NB. He who knows how to convert those remains

to his use, in another kind of way will do better, and extract thereoutof so much as he is constrained to lay out in buying his Corn, insomuch that he can have his Juices as it were even *gratis*. But of these things more hereafter.

As touching these Juices, they comprehend in them the whole Virtue of the Corn, out of which you may when you please boil Ale, make Adust or Brandy-wine or bake spiced Cakes; for if it be used to them instead of Honey, it makes them much the sweeter. These Juices therefore are to be prepared in those places in which Corn is sold at a very mean rate, and which cannot be exported to foreign parts, and is there in such great plenty, as that the Country-men know not what to do therewith, but there it lies in great Stacks and rots. Farther, they are yet prepared with greater benefit and more gain where the plenty and cheapness of wood is, the which yields no small encrease and addition to the Gains.

But that the nature and condition of this Labour may be the better understood, the following Computation will shew. Suppose I take 8 Barrels full of Corn and bring them into Malt, then boil it into Ale after the aforesaid way, and condense it into a Juice, wherewithal I fill one Barrel: This one Barrel now is far more commodious to be carried into foreign places either by Waggon or by Ship, than those 8 barrels, and will bring me double or treble the profit that 8 *Medimni* (a Measure containing some six bushels, or the eight barrels) of Corn. Why? because the greatest labour is already over, and there remains but very little to boil the Ale out of the Juice, as the following Example will demonstrate.

I buy me eight barrels in that place where Corn and Wood are to be had at a mean rate, and there

passeth some River or other by the place, as the *Mhene* in *Franconia*, *Nicer* in *Suevia*, *Visurgis* in *Hassia*, and the Dukedome of *Brunswick*, *Albis* in *Saxony* and *Misnia*; for in all these places there is abundance of Corn, and store of Wood, and the price of each, mean enough in conscience. If now one *Medimnus* (or six bushels) of Corn be esteemed at the price of one Imperial, eight *Medimni* will yield eight Imperials; the Wood will cost one Imperial, the Labour one Florin: The juice out of the 8 barrels of Corn may be put in a Fir-Cask, as they use to do with Honey, that so in paying the carriage, it may not be accompted for Wine or Ale, but some dry Goods, and so valued by the hundred, as other dry Wares are priced; so then the Barrel will cost the Carriage by Water to some of the Maritine or Sea-coast Cities, two Florins. Now if we sum up all these Expences upon the Corn, Carriage, Fire, and Labour, they come to 12 Florins or 8 Imperials. But now, out of that one Barrel of Juice there may be made eight Barrels of the best Ale, and if you will have it somewhat smaller, then ’twill make 10 or 12, according as you boil your Ale to a stronger or weaker degree. However, this is certain, that one Barrel of Corn will yield more than a Barrel of good Ale; so that out of one Barrel of Corn may be made one and an half of strong Ale. Now then, if one of those Barrels of Ale yield three Imperials, the eight Barrels, which cost the buying, and reducing into one Barrel, and the transporting it, eight Imperials, may there be sold for 24 Imperials; from which the eight being subtracted, the remainder of the Gains is 16 Imperials, which verily is enough upon those 8 Barrels.

But put case the Corn were dearer, and the Carriage of the Juices to those places did cost more, and that those 8 Barrels of Corn, or one Barrel of

Juice, did yield (besides all the costs) only 8 Imperials profit, yet would this be profit enough, and may well content a Man. I forbear to mention the other benefits and profits arising over and above besides this Gains; for by this kind of way is saved and made vendible that Corn which would else be spoiled: Besides in a plentiful time the mean-prized Corn may be bought up, concentrated and kept till a scarcity come. Nor is there any cause of fear that it will be devoured by the Mice and Rats, or be spoiled with lying, or wax mouldy, or be any other way corrupted.

Nay more, it occupies less room than the Corn would; for where one Barrel of Juice lies, there should have lain eight Barrels of Corn.

Besides, the Magistrates and Subjects may by this means reap much profit and help. The Magistrate may be satisfied by taking Corn of the Inhabitants instead of tribute. The Subjects may by the benefit of this Medium satisfie the Magistrate, and there will not need the selling his Cattle, or Sheep in the Fold, or to borrow Money upon use, and to give his Wife and Children for pledges. For there is requisite no other labour than that the Magistrate appoint a place to boil his Ale, in which the Corn may be malted, boiled and thickned into Juices. As for Wood, that he has himself and needs not lay out a farthing upon that. So now, by this means may a Country be brought to that degree of happiness as never to want Money, Corn, or any other necessary things. For where the Juices can be but brought to the Sea-towns many thousand Barrels full may be sold to those Magistrates and Merchants which send their Ships into the *East* and *West-Indies*; in which Countries may be made good Ale at any time of the

Year, even in the midst of Summer, or in the Dog-daies themselves, if you have but Hops and Water at hand; the which is far better and more profitable.

For in the room of this one Barrel of Juice, there must have been stowed 8 Barrels, and yet that sometimes turns sour too, and is spoiled, the which never betides these Juices. Now such Ale prepared of the Juices by means of Hops and Water are much wholsomer than the common Ales are, because that the Fire hath consumed all the Crudities; in the boiling of the Juices or hath corrected them, and this every one will readily believe or assent unto.

Nay more, these Juices may (and that with very great profit too) be sent into those places wherein (by reason of the abundance of People there) Corn and Ale is much esteemed, as in *Holland*, and the bordering Countries. If the Ale-brewers could but once get such Juices, without doubt they would not be at the costs to brew it out of the Corn, for they would not need so much time to brew in, nor such Coppers, nor so many Mens help, all which they must necessarily have in the common way of brewing. In these Juices, there is much sparing of Fuel, (the which makes the common way of brewing Ale, more costly,) and of Men's labour which doth likewise prove chargable. Nor are we silently to pass over that great benefit which they have hereby, for that good Ale and such as will not sour may be made without any danger even in the midst of the Dog-days. Every one knows what it is to brew Ale (then,) and that the brewing is at other times sufficiently troublesome, *viz.* so to order it as to prevent the danger of souring. But now this brewing (that I mention) is void of all this kind of fear of souring; whereas the usual kind of brewings do for the most

part (in the Summer season) become sour either in the straining it through the Grains, or by standing in the Coolers: but these labours are in our brewing already dispatched, and that in those places where the charges of Labourers, Wood, and Room fit for boiling it in, are not so great.

This work therefore is of mighty profit both to the buyer and seller: For the seller can afford his Corn at a reasonable rate. And the buyer need not be at any other charges in brewing good and wholsome Ale at any time of the Year save only the hire of one man that may prepare or sit the Juices, and Hops, and Water for the boiling, and set it a-working or fermenting and pour it into the Vessels. Whereas on the contrary in the common brewing of Ale there needs many mens help, huge Coppers, and wooden Flats and a great deal of room to brew in, and store of Fire which is sufficiently dear in some Countries; all which are avoided in the brewing with the Juices. Do but consider I pray what a notable and profitable thing this would be in great Cities, and especially in those places where Houses, Fuel, and Mens labour are very dear, if such kinds of Juices were set to sale; that so every Master of a Family might buy up some Barrels of this Juice, and dissolve them at his own home with Water and Hops, in a small Copper according to his pleasure, and make the said Juices into Ale, as fat or as lean or small; and as bitter or as sweet as he listeth; and then put it up in his own purified and well cleansed Vessels, and he and his, drink thereof all the whole year; and if need be, might make either Physick-drink or Spiced-ale. And would it not be much better than the buying such Ales of the *Brewers*, which are sometimes either too new or too stale, and oft-times acid, impure, not well boiled, and stinking, and instead of Hops have Aloes,

Xanthium or Burr, Henbane and such like Herbs put in them. For in some places, the *Brewers* use such kinds of Herbs and the like hurtful things, instead of Hops, to make their Ale bitter, and to save a few charges in the making their drink. Therefore all such as use to drink of such kind of Beer are never wont to be in compleat health; and especially in watery and moist places they are for the most part afflicted with the Scurvy, Melancholly, *&c.* which is the usual fruits of such kind of Drinks, for they obstruct the internal parts of the body and the principal members, and stir up such Diseases. But our Ales that are made of the Juices and good Hops do not only not stir up such Distempers, but do even (by their purity and clearness) resist them, and preserve men from them; but especially if such Juices be made of such Malt as has not a smatch of the smoke of Wood, but is dried in the Air, and which are so handled in the fermentation or working of them as that all the defilements settle to the bottom; for then will you have such Ale, as doth both in wholesomness and sweetness exceed such Wines as are infected with, or have a tang of, *Sulphur*, or that grow in a soil abounding with Chalk. They dull not the head, they do not cause windiness, they puff not up the body after the manner of other Ale; they do not stop the Urine but provoke it, and keep the Belly soluble: They are Medicinal without the addition of Physical Herbs, are sweet and wholsome, and of an excellent tast, and such as the like of them cannot be made without this medium or way.

Such Ales deserve a peculiar praise, and many would there be who would drink of Ales often, could they but get such: and would leave off the drinking troubled, unwholsome, and sulphured Wines. For my own part I will make use of such kind of Ale, and

Wine, in my own house for the sustaining of mine own Family.

I could mention much more concerning such Ales if the time would permit me, but I have spoken enough already. And as for what remains unwritten here, may be gotten out of, (or understood by) the things here described. I question not but that good (or provident) Masters of Families will set about this business of preparing these Juices, and of sending them into such places where they may be sold to Ships that are bound for far Countries, and so mightily enrich those Countries with store of Money that abound with Corn.

Besides, the *Brewers* of Ale or Beer that are in great Cities will not disdain such an excellent Art, but will themselves buy such Juices at a considerable rate.

Princes, Nobles, and great Cities, will also provide (or buy up) great quantities of such Juices, and lay them up in their Forts and Castles, and in their Store houses as a good Treasure, that so they may have it to use in time of necessity. Nor will good (or provident) Housholders neglect to furnish themselves therewith, that so they may have wherewithal to sustain them and theirs in a time of scarcity.

In the time of Wars, eminent Captains and other Military chieftains will take care to have them, and carry them into their strong holds, and there loosen them (or put a proportionable quantity of Water to them) and turn them into good Ale; as for Water, there's to be found (enough) of that every where, and so need not store up that, and as for Hops that is easie enough to be bought.

So then, there will be a notable benefit by this Artifice to strong Holds and Castles, and such fenced

Places as fear a Siege. Briefly, Words cannot express the benefit and profit which will redound to all places, by these Juices, in times both of Peace and War.

Therefore every Magistrate who has a care of his Subjects health and preservation, will worthily and with his utmost diligence carefully provide for the having such prepared Juices, that so in times of necessity they may be at hand for use.

But now, some may object and say; I perceive and well see that this Artifice is good and profitable, but 'tis not so easie a matter for every one to purchase himself Coppers requisite for this work? To such I answer. 'Tis not so needful that every one should furnish himself with such (utensils); if there be in every City but one man only that is imployed thereabouts, who may buy off his Neighbours Corn and pay them their Money for the same, 'tis sufficient. And if others also betake themselves thereunto, there will be the more Money gotten, and the Country made the richer; neither is any reason to fear or doubt, but that, if he shall bring eight thousand Barrels of Corn condensed into a thousand Barrels of Juice unto the Cities on the Sea coast, he will sell it off for ready money. Will a thousand Barrels (think you) be sufficient (or be a drug) in some populous City wherein are daily drunk some thousands of barrels of Ale? Verily he that shall expose to sale in such a like City many thousand Barrels, would not stay long there, but would be loaden (or furnished) with ready Money for the same, by those who knew the Art of making Ale with such Juices.

I do verily believe that it would be altogether much better to sell Corn after such a manner, and so

to have profit by it, than let it perish with lying; which is a great sin before God, and a shameful disgraceful thing before Men.

But further, It may be objected and said. If this Artifice of making Ale were set up in those places, in which there is wont to be a certain Tribute paid the Magistrates for every Barrel (of Ale,) it would not be allowed of, because by this means the Tribute or Customs due to the Magistrates would be diminished. This inconvenience is easily prevented, if the Magistrate impose the same Tribute of Ale on the Juices. For by this means the Tributes or Customs would not be at all diminished, but be equally as profitable upon the Juices, as upon Ale. The like may be done with the condensate Juices of Wine.

So then ’tis clearly evident, that there cannot possibly arise any detriment from these Juices, but rather infinite profits and commodity. And therefore every Magistrate should seriously cause his Subjects to make these kind of Juices of such Corn as they cannot sell, and instead of spoiling it get riches by it. Certainly this would be far better, and far more profitable for such Subjects as are very poor and go miserably tattered and naked, and have nothing to help themselves (of which sort there are not a few.) Verily there would be no want of any thing, but the Subjects as well as their Rulers would have enough: And for this reason have I willingly undergone this trouble and this labour in manifesting and laying open this Artifice.

And although I am not to expect any reward from any body for manifesting a thing of so much concernment (for this is an unthankful World) yet have I obeyed the will of God and have out of a Christian love benefited my Neighbour, and in this

well-doing do I rest, no ways doubting but that God the rewarder of every good (action) will recompense in another place, this my well-doing which I bestow upon the World.

Farther, I can in a kind of a Prophetical manner predict, that if regard be had of this my wholsome Doctrine and Admonition, many Countries will in a very short time recover their former happiness, and both the highest and lowest will live in a prosperous condition; but especially those who first set upon this business afore it becomes common, will get great riches. Now then, whosoever they be that by the help and benefit of this way shall get the blessing of God, let them not forget the poor, but bestow that blessing on the cherrishing and comforting poor Orphans and Widows, to the Honour of God. For the Treasures and Riches in this temporal Life cannot be better laid out, and laid up, than in distributing them amongst the poor. For by that means there's no fear of being spoiled of them by Thieves and Robbers; And more, in the Life to come, they shall be recompensed with a ten-fold reward.

CHAP. III.

Of the Concentration of Vegetables.

We have already taught in the two foregoing Chapters by what means Wine and Corn are to be by an Artificial condensation reduced into a narrow compass, and brought to be a gainful Merchandice. It now remains to shew the way conducing to a condensation of the Virtues lying hid in Herbs, Bushes, Shrubs, and Trees: (which Vegetables do most plentifully abound in most places and yield no profit) that so even out of them as well as from Wine

and Corn may be reaped a very great profit. No body is ignorant of this, *viz.* That there is nothing more vile and of less esteem than the Grass (or Herbs) of the Field, and Briars or Bushes, and Shrubs, and lofty Trees too, especially when being at a good distance from Men's dwellings they cannot be applied to any use, and upon this account are they not valued at all, nor by reason of their distance profitable to any, but there they grow and perish in those vast woods and desart places. And this is to be seen in those most huge Woods of *Germany*, such as are the *Ingriones*, the Wood *Ardenne*, the *Ottonicane*, *Hercinian*, *Semane*, and *Bohemian* Woods, and the woods of other Countries, in which woods there rots and is spoiled above ten times more wood than men make use of.

Now no body hath hitherto known what use to put those Woods unto; such Woods as are not too far off from Cities or Villages, do Men make use of for building, for firing, for boiling, or brewing, and for baking, and other occasions, so that the Wood which is daily used, and every year fetch'd from the bordering Woods or Forests, is thereby saved from rotting and being spoiled.

But as for such wood as is in Mountains and Woods scituated far off from mens dwellings, and which are not frequented, that is not of any use at all, they are Dens and lurking places for cruel Beasts, as Bears and Wolves; which said wild beasts do annoy and hinder other profitable ones, as Staggs, Does, Boars, Hoggs, Sheep, &*c.* from feeding on the wild Fruits of such places. But who is there will amend it, and bring such places to a due or good use? What! should such vast Woods, which are the receptacle of those cruel wild Beasts be cut down and lie a rotting, or be consumed by Fire, so to destroy

those wild beasts? Surely no body will attempt it, as fearing the toilsomness requisite hereunto: And besides, forasmuch as no other profit is to be thereby expected, save an extirpation of those wild beasts, there's no body will take that Task upon him. Nor is it a thing so behoveful to Fire, and burn down such huge Woods, as we read in History, that some have heretofore done, *viz.* most great Woods have been burnt, meerly to destroy Insects and other hurtful, wild, and ravenous beasts. There is an hazard run in so doing, for such a Fire may spread wider, and do a great deal of mischief.

There are such Examples which may be produced, which witness how that Fire being put to Heaths, have (by burning thereof) crept into the bordering Woods and destroyed them, and mightily injured the neighbouring Inhabitants: And therefore 'tis not so advised a Work to consume Woods by Fire; and to cut them down, that so they may lie and rot, and be thereby rooted out, cannot be done, because of the great costs thereto requisite.

So that such places must of necessity even remain the Receptacles of hurtful Beasts and Thieves; for albeit that sometimes the Glass-makers do in suchlike places build their Furnaces or Glass-houses, yet they fall far short of consuming so much Wood by their making of glasses, for those Woods are scarce the thinner or lesser for that: Tho' they spend daily in every such Glass-house twenty loads, yet such a vast quantity as that is, will not decrease. Besides, the Glass-men do not use all the wood without making any difference, but make choice of the streightest and smoothest wood, such as they may best and easiest cleave: As for shrubs and knotty *Oaks* and *Beach*, those they touch not. So then the best Trees

only are used about their Glass Works, and the brushy woods, as *Briars*, *Thorns*, *&c.* and which are the most commodious hiding places for the wild Beasts, are unmeddled withal, as being unprofitable for the Glass-makers: Nay, they let most curious arms or branches of *Beach* lie a rotting, and make use only of the body of the Trees. Moreover, in such Woods as are far off, the Glass-makers build no Houses, but do erect them as near as possible they can, to such places as are inhabited, because they must of necessity have commerce with men.

Farther, 'tis not a little wood that is spent in the Mines about Metals, especially in such Mines where Iron is molten; but what we said but now touching the Glassmen, the same is to be observed here; for such metal-melting Houses are never erected on the high Mountains, or are built in far remote Woods, because they must have the assistance of Men, and water to drive their bellows-mills, and besides the place must be such, as that all Necessaries may be brought them in Waggons, and their Iron transported into the Cities or Towns. Nor do the Metal-melters indifferently use any wood they meet with; nor make they their Charcoals of every kind of wood, but leave the shrubs and bushy woods as unfit for coaling. And therefore those great and vast woods, tho' there be Glass-houses and Metal-melting-shops in many places, do remain untouch'd, because no body knows the use of them.

But now, forasmuch as I have all my life-time most accurately search'd by a diligent observation into the wonders of God, and have not spared any labour or costs about the secret wonders of Nature, and have learned from Nature her self, my instructing Mistriss, that God being a true and just Lord over his Family,

did neither do, make, or create ought without certain and just causes, which notwithstanding is not regarded by the most part of us men, who imitate the irrational beasts, and alwaies live without the knowledge of God and of His Works. Verily, we have no colour of Reason at all for it, not considering that men were created and appointed by God for another-guise end, than the brute beasts, which are void of all Reason; and we regard not the Truth of that old Saying, *God and Nature never make any thing in vain.*

So then, whereas this is a Truth (as assuredly it is) certainly we may see that these huge Woods were not in vain made, but that they have some benefit (for so they have) *viz.* a most great Treasure for such who know it, and know how to use it. Which I will therefore shew, as clear as the Noon-day Sun, and will so set it afore the eyes of the blind and darksom world, that the Deriders and Contemners of natural Philosophy, such as is to be Learned only by the fire, and not out of *Aristotle*, may be even enforced, will they, nill they, to confess and grant that the Fire is the true Teacher and Master of natural Arts, and so will be; for whosoever they be that are Ignorant as to the Fire, and that know not its wonderful efficacy, tho' they may be most skilful Proficients in foreign Tongues or Languages (which in the more-secret Philosophy makes not at all to any purpose); yet nevertheless they will not be able to accomplish any the least matter in things of so great a moment: I do therefore say, that such men as are skilled in natural things, are not of right to be contemned, or secretly back-bitten by those who say, Believe not such a man that hath not attained the empty vain Title of a Doctor in the Universities. I confess ingeniously, that I never frequented the Universities, nor ever had a mind so to do; for should I have so done, haply I

should never have arrived to that knowledge of Nature, which I mention without boasting, as I now possess; neither doth it ever repent me, that I have put my hands to the Coals, and have by the help of them penetrated into the knowledge of the Secrets of Nature; I do not desire to disturb any one in this way, or to thrust any out of their places; I never was willing to live on the costs of great men, but have with my own hands gotten me my Food and Raiment, alwaies advisedly thinking on that most known Verse;

——*Alterius non sit qui suus esse potest.*
Let not him anothers be,
Who can of himself live free.

But to return to my concentration of Wood, I can with truth affirm and will experimentally demonstrate it, that the greatest Treasure of the World; yea, as great or greater than is in Wine or Corn, lies hidden in Wood. Wine and Corn do require the Labour of Man for its growth out of the Earth; but Leaves, Grass, Briars or Bushes, Shrubs, Twigs, all sorts of Trees great and small, do come forth out of their seeds and sprouts and grow up and encrease infinitely without any help of man at all.

Therefore I say that more profit may be reaped of Wood than of Corn and Wine, were the Art of extracting thencefrom so great a benefit but known to any.

So then, forasmuch as this little Book (as being the first part of the Treatise of concentration of things) treats of the emendation of Vegetables only; and that of Wine and Corn is already finished; I will now in the name of God set about Wood, Leaves, and Grass, and lay open those most great and hitherto hidden

Treasures and Riches, and set them forth before the Eyes of the whole World. And I pray God, the Omnipotent, Wise, Unsearchable and Merciful Lord and Father of all Creatures in Heaven, in the Earth, Water and Air, that he would so govern and guide my hand that I may here write and teach nothing save only such things as serve for the Glory of his Divine name and the health of all Mankind. *Amen.*

We have shewn in the two foregoing Chapters how Wine and Corn are to be condensed into their juices, that so they may be commodiously sent into those places, in which profit may be gotten.

Here now falls in this question, How the Juices are to be squeezed out of Herbs, Twigs, Shrubs and great Trees, and being pressed out what good they serve for, seeing they are not of use for meat and drink like those which are extracted out of Corn and Wine.

To this question I make this reply, that indeed there is not any food to be prepared from them, but that yet other things are thence preparable, and such as men cannot be without, *viz.* Wholesome Medicines, and likewise Gold and Silver wherewith a man may also buy, besides Wine and Corn, other necessaries as Garments and other appurtenances which men stand in need of, besides meat and drink.

But to begin the work it self, we should in the first place teach the way how juices may be squeezed out of Leaves, Grass, Shrubs, and then afterwards shew their use. But forasmuch as none is of so weak a judgment as to lay out Moneys or things valuable, and to bestow his labour and sweat on such a thing whose use and profit he is ignorant of; 'tis therefore necessary, that (before we come to teach the way of squeezing out the Juices) we first shew, what benefit and profit ariseth from that kind of work; that so a

Man's labour may not be spent in vain: To give satisfaction herein, I affirm, that the greatest and best virtues of all Vegetables are hidden in a certain Salt which the Physicians and Philosophers call the Essential Salt. Of this Salt all Vegetables are full, but yet, one fuller than another as experience testifies. Such Herbs as have not much taste, as Lettuce, Coleworts, Rapes and such like have a less portion thereof, and are therefore easily putrefied. But such as are sharp and bite the Tongue, as *Water-robbin*, *Arsmart*, *Laurel*, *Pepper-wort*, *Scurvy-grass*, all the kinds of *Cresses*, all the sorts of *Radishes*, *Leeks*, *Onions*, *Garlick*, *Mustard*, and such like; also all bitter Herbs, as *Carduus benedictus*, *Wormwood*, *Fumitory*, *Esula*, *&c.* all such as these are full of it. Besides, all such Vegetable plants as are naturally sour, yield much of that Salt; amongst which, may be reckoned, unripe *Grapes*, sour *Apples*, sour *Cherries*, Wild *Plums*, rough (or wild) *Grapes*, the unripe *Mulberries* or *Black-berries*, the unripe *Barberies*, *&c.* But yet some of them yield more, others less Salt; which inequality and changableness is accidental, for they are as to their natural foundation like each other.

NB. Some Herbs and chiefly those which have a notable bitterness, as *Carduus benedictus*, *Wormwood*, *Fumitory*, do (after their being squeezed, and when their Juice is depurated, and the Phlegm draw off, and the remaining Juice concreted or condensed in the cold,) yield natural Nitre, and such as being put upon a burning Coal will presently burn up in a flame, like the common Salt-petre which is usually extracted out of the Earth digged in Stables, and so concreted, or crystallized: As for other Herbs and Fruits which are not bitter, but have a piercing sharpness, as all the *Cresses*, they (after their expression or squeezing) yield a volatile Salt, which

does not burn like that which is drawn out of bitter Herbs: Such as have an acidity in them, as *Sorrel*, *Barberries*, *Ribes*, curled *Grapes*, wild *Apples* and Orchard ones, and other unripe Fruits, do yield another Salt, *viz.* a Salt tasting like the acid taste of Wine, and resembling Tartar of Wine, in taste, virtue, efficacy & propriety.

And now albeit that these three kinds of Salts are unlike in taste, yet notwithstanding the one is most easily transmuted into the other, insomuch that Tartar may be made Salt-petre, and Salt-petre Tartar. The third sort which is more volatile than the others, and which proceeds from the *Cresses*, *Mustard*, *Aron*, *Pepper-wort*, *&c.* will easily be turned into either of the former.

But as concerning this last, it is virtuous in Medicine, as I have hinted to you in several places in my other Writings, but (set aside its Medicinal use) and it is of but little benefit. The two latter, *viz.* The Nitrous, and Tartarous are of various use. The Dyers use Tartar in Dying their Cloths, and Salt-petre is used to make Gun-powder withal, and for the Transmutation of Metals, and other such like Arts, as I have clearly proved in my Explication of my *Miraculum Mundi*. Forasmuch therefore as both sorts of Salt are used in great quantity throughout the whole World, and that there can scarcely be had so much as serves for necessary use, and upon that account are always good Commodities, and that Salt-petre is twice the value of Tartar, therefore 'tis but fitting, and well worth while to extract Salt-petre out of the Juices of Herbs and Trees, it being of more value, and better price than other Salts. But if it should so be, that there should be so much Salt-petre as that it should be of a poor price, then may the

Juices be turned into Tartar. But forasmuch as it will not easily so happen, that there should be such a glut of Salt-petre, it will be the best way, to improve those Juices on the making of it; and specially because it may at all times serve for the profitable bettering of Metals; nor can ever so great a quantity be produced, but that it will sometime sell off. 'Tis more profitable, and better to use it for the bettering of the meaner Minerals than to make Gun-powder with it; and were not that most pernicious Art already too well known, it were better to be without it, than to make it, so far should it be (from any one) to describe the manner of making Gun-powder.

But forasmuch as neither my desire nor will tends to be any occasioner of hurting my Neighbour by the help of Salt-petre, but inclines rather to benefit him thereby; and to this end I have already clearly enough disclosed many most profitable Arts which proceed therefrom, *viz.* in my *Miraculum Mundi*, and in the Explication of the same, and moreover shall do in the following third and fourth part of this Book, about the bettering and concentrating of Metals: I am, verily, confident, that none will interpret it in the worst part, if I shew the way of making Salt-petre out of Wood and other things, that so, our Country may by the benefit of (such) Herbs, Grass, and Wood, which otherwise, ly a rotting, and are of no profit, be enriched (if it be only sold) with abundance of Treasure, and may afterwards be spent on most profitable Arts, as may be seen in the *Miraculum Mundi*, and in the Concentration of Minerals and Metals. So that he that would not make it into Gun-powder, has no need so to do.

Besides these Virtues of Salt-petre which we have reckoned up, there do daily more and more new and

admirable ones spring up out of the dark, all which, were they here to be summed up they would even draw the whole World into an admiration of them. But we will forbear to multiply more words concerning things of such moment; for it may easily be perceived from what has been hitherto demonstrated, and from those Publications I have made (by my Writings) that many more, and greater things lie hidden in this Subject, which neither I, nor others know of. Deservedly therefore may Salt-petre, or Nitre, be termed an Universal Subject, and Wonder of the World, notwithstanding many rude and unskilful Fellows, will upon this saying, shrink up their Noses, and audaciously contradict me (and say) that Nitre is not the true and Universal Dissolvent.

But if Nitre be not that Universal Subject, then let those that prate against this Judgment or Opinion of mine, produce another and better Subject; which, yet, in my Opinion they will never be able to do. If it were not an Universal Subject, how comes it to be so plentifully found to be in all things. Is it not found in all Vegetables? Is it not in all living Creatures that live either under the Earth, or in the Waters, or in the Air, or on the Earth? Is it not met with (or found) in the inmost Bowels of the Mountains, and even in the most hard Stones? I will demonstrate it in this small Treatise by most clear Arguments, and will most evidently evince it.

In the first place, that all Vegetables have it, is already clearly demonstrated and proved, for I my self (and I am the first, as I know of) made trial and turned their Juices into natural Salt-petre. But I will now so evidently shew the truth of this thing, that even those blind Back-biters and Detracters shall feel

it with their hands.

In the first place therefore, I demand, whence the common Nitre is gotten? Is it not out of the Earth, which is digg'd out of the Stables where Beasts stand? For it has insinuated it self into (or joined it self with) this (Earth) passing out of the Excrements of the Beasts in length of time, and hath coagulated it self therein, out of which it is at length drawn by pouring on of water, and then is boiled up into Salt-petre. Who can deny this? I think no body can. So then if this be granted, that Nitre is found in the Stables where Cattle stand, the Question is, By what means, and way it came into the Stables? It is by the help of the Urine and Excrements which the Beasts have there cast forth. Then again, I ask whether or no those Beasts have those Excrements from their Meat and Drink, or from elsewhere? They cannot arise from water, forasmuch as they drink nothing but Water: So that they must necessarily have their rise from the food they eat, and that consists of the Vegetables, Grass, and Herbs. Therefore we affirm, that the Salt-petre was of necessity in these Herbs, and Grass, afore the Beasts feeding on them. For if it had not been there it could never have been made in the Beasts Bodies that which it was not afore. For their Stomachs contribute nothing to this Operation, save a bare putrefaction. And besides, the Countreymen do even the same thing, for they gather up Stubble, the Leaves that fall from the Trees, the Grass, and such like things, and put a great quantity of them into a Pit together, and there leave them so long, till by the help of Putrefaction they are all turned into Dung, and therewith do they afterwards Dung their Ground (in such wise) as is wont to be done with the Excrements of Beasts. Therefore, forasmuch as that putrefied Grass and Stubble doth

dung the ground and render it fruitful, (as well) as the Excrements of Beasts, it must needs be granted, that they have likewise Salt-petre in them. For it is not the Dung, but the Nitre in the Dung, that is, the Author of that Dunging Impregnation and Fertility, as I have already confirmed by Arguments in my *Miraculum Mundi*, and which will be sufficiently convincing proofs here in this place.

I would therefore fain see that Man that dares be so bold and heady as to deny this thing, that the Essential Salt neither is, nor can be made, Nitre.

And now we come to treat of the Beasts in the Fields, of the Fish in the Waters, and of the Birds in the Air, that so by a thorough examination of all these sorts we may see, whether or no they are enriched with Salt-petre, and whether or no their Essential Salt be like the Essential Salt of the Vegetables, and can by the same means pass into Nitre.

In the first place, and above all, this is here to be considered, as a main principle, (*viz.*) That all those things which dung the Fields and Lands, and fatten them, most necessarily contain in them Salt-petre. For from this only, and alone, comes all the fertility throughout the whole Earth, which Axiome cannot be gainsayed. But now, that the Animals, or Beasts, Birds, and Fishes are Partakers of the same Virtues, I firmly gather from hence.

First of all, it is not unusual for the Gardiners to put the Horns, Hoofs, and Bones of Beasts, to the Roots of Trees, and so cover them over with Earth, and that on this account, because they make them exceeding fruitful. This now is every where used: Likewise the Gardiners do every where buy up Hens Feathers, Hens, and Pidgeons Dung; as also from the

Tanners and Curriers the Offals or Shavings of the Beasts Skins, and their Hairs, and use them to enrich their Gardens. The Vine-dressers also buy up the shavings of Horns of the Comb-makers in many places where they can get them, by which, they fatten their Vines, far better than with Dung, and that lasts for nine or ten years. The Gardiners do likewise buy up from the Tailors bits, or pieces of Woollen and Linen to dung their Gardens when they plant Colworts. If they did not find any Nitre, or Fertility in them, to what end would they lay out their Money on so base a Matter? To the Ignorant and Unskilful, these things may seem wonderful and incredible, because such a kind of dunging Land is not every where in use. He that is incredulous, let him go to *Colen* on the *Rhine*, and there he'll find that I have spoken nothing but the truth. All these things do the Gardiners make use of according to their ancient custom, for from their Predecessors learned they these Secrets. Nor know they what other reason to alledge for their doing this, but only tell you, that they serve exceeding well to enrich their Fields and Vineyards.

But I do assuredly affirm, that 'tis the Nitre that is hidden in these things, performs this effect: There is therefore far more abundance of Salt-petre in the Superfluities (as Nails, Horns, Hair, *&c.*) than in their Excrements, or Dung. And I thus prove it.

First, Because they will give you for one Sack full of the Shavings of Horns, half an Imperial, which is as much as will buy four or five such sacks full of Cow, or Sheeps dung.

Secondly, They will give the Tanners, or Curriers, above an Imperial for one Cart-load of the Shavings of the Hides, whereas with the same Money they

may buy three or four Load of dung. Rags are sold for a quarter of an Imperial. Were they not virtuous or effectual, why should they be so dear? This here spoken, we have proved so to be, by the customary practice of the common men only, as Husbandmen and Gardiners. Were it lawful for me to reveal somewhat to the purpose, I could teach how to extract out of every hundred weight of Bones, in Beasts, Birds, and Fishes, ten pound of Salt-petre. But this is not to be divulged.

Now it remains in the next place, to confirm, that Nitre does not only lie hidden most plenteously in the Vegetable and Animal Subjects, but that it may be digged, or gotten out, and prepar'd of Stones, Rocks, Cliffs, Hollows of Mountains, and out of the plain Field in a very many other places; and this is undeniable, for 'tis evidently known, and if need were, I could, for witness sake, make mention of many such Testimonies. He that is desirous of knowing more, as touching this salt of the Earth, let him peruse the ancient Philosophers. But forasmuch, as every one hath not those Books at hand, and that many Men cannot understand them, I will for Amplifications sake add yet one demonstration, to shew whence that Nitre ariseth, which sticks on to, or swells out of those moist and old Walls of Houses. Comes it not from the Mortar, with which the Bricks are joined together? Not only all *Stones* are fit for making Calx, or Lime of, but also all kinds of Stones, which break, or grow in the Waters, like Drops, or Pebbles: Likewise, those stony things which grow in the Sea, as Coral, the Pearl shells, or Mother of Pearl, and Shell fish of all sorts, which being burnt, moulder in the Air, have in them plenty of Nitre, and will easily yield it forth to those who have the way of extracting it disclosed unto them. But this is not the

place to mention it in, because I have determined to treat here, of only expressing the Juices of the Vegetables, concentrating them, and making them gainful or profitable.

Forasmuch as we have hitherto understood (or shewn) that Nitre or Salt-petre may be had from all things, *viz.* from Herbs, Wood, fourfooted Beasts and creeping Things, from Birds in the Air, and Fishes in the Water, yea from the very Elements themselves, as Earth, Water, Air, and Fire; It must needs follow that it is that so much spoken of Universal Spirit without which nothing can either be or live: It is the begetter and destroyer of all things; in which all things are, as I have demonstrated in my *Miraculum Mundi*, out of the most ancient Philosopher *Hermes*. I therefore hope, that no body will any more doubt thereof or oppose himself with a perverse stubbornness against a truth so manifestly known. Were not the shortness of time an impediment unto me I could most easily produce more arguments and those too more pregnant. If any one is minded firmly to cleave to his own stubborn perverseness, even *Hermes* himself should he arise from the dead, would lose his Labour in teaching him; and therefore let them keep their contumacy to themselves.

We have sufficiently confirmed and that by arguments enough, that Salt-petre is an universal Subject, and every where to be found. Hence it may be easily believed that it may also be met with in woods, and that more strong, more powerful, more corporal, palpable, and visible than in any other Subject: Upon this account therefore is it to be also sought for, and drawn forth out of them too. But forasmuch as such an Extraction cannot be made afore that the Juices are prest out of the Wood, out

of which Juices the Nitre is to be drawn forth, the whole Art consists in Squeezing out these Juices, but yet by another kind of way than is done with Herbs. Therefore the due Presses being fitted ready, I shall be able to shew him who requesteth it at my hands (so as he does not endamage me) the way of squeezing them. For to prostrate a work of such great moment to every ones view, whereby those that are unworthy, should partake of such great Secrets, and by which a thing of so much value should be obnoxious to a common Abuse, is not verily, either necessary, profitable, or laudable. Let not any one therefore take it amiss, that I have so careful a regard of things so considerable. Let it suffice, that I have detected the thing, wherein such great Treasures have hidden themselves, which hitherto are profitable to no body, but are easily acquirable, or to be had. Do but look a little upon those most vast Woods of *Germany*, which are stored with such mighty abundance of Trees, that wood is of no account. There hath been none as yet that has converted them unto their use, save a few, who in some places make Pot-ashes of the wood they burn; and yet they have but small gains therefrom, because they can't have vent sufficient for as much as they could make by their burning the wood, nor do any use them, but Soap-boilers, and Dyers.

Besides, I never as yet saw the Man that duly attempted that Artifice, and so administred it as to get therefrom a greater gain. For sometimes they gather scarce an hundred weight of Pot-ashes out of the burning of ten or twenty great Trees, and they can hardly have above five or six Imperials for it. And now consider but the great Labour and Sweat in burning so much Wood into Ashes, and of boiling the Ashes into a black Salt, and then of making this Salt

red hot in peculiar Furnaces, that it may become white, green, or blueish; all this consider'd, 'twould make a Man admire what 'tis that could stir up those that follow this work, or order it to be done, to suffer such a quantity of Trees to be burnt up, for so very little profit. But what need many words? They have the wood for nothing, and (as the Proverb runs) *The half White of the Egg, is better than the empty shell.* Haply if they knew how to make any thing better, or more profitable out of their Wood, they would not omit so to do.

How many hundred weight of wood, are they to burn afore they have one hundred of Pot-ashes? But now if the Juices that are squeez'd out of them were boiled into Salt-petre, they would get ten times the profit with far less trouble.

Let us compute the case, and suppose that out of an hundred pounds of Wood, there are squeezed forth twenty pounds of Juice, and that from these twenty pounds of Juice, you have some 4 or 5 pounds of Nitre, and that a midling Oak or Beach will load, when cleft, some ten Carts, and each load hold twenty hundred weight. Now then, one hundred yielding five pound of Nitre, a load of twenty hundred, yields an hundred pound of Nitre; the Tree that is about ten load, yields a thousand weight.

Now we'll put case that a hundred weight of Nitre yields twenty Imperials, which being ten times multiplyed, makes two hundred Imperials for ten loads, or for that one Tree divided into ten loads.

But to wave so accurate a computation, and not to extend it too far, we will suppose a hundred of Wood to hold only three pound of Nitre, and a load to be about twenty hundred of Wood; this load will yield Sixty pounds of Niter, and the Tree ten loads, So

there will be Six hundred pounds of Niter. If now one hundred (of Nitre) will cost ten Imperials, that Tree will yield sixty Imperials for the six hundred pounds of Nitre. The smallness of the cost (in making it) makes the labour the more profitable; nay, if by this invention of mine, the price of Nitre should fall down, even to ten Imperials (which notwithstanding, will not so easily come to pass) yet would the gain thereby be great, yea ten times more than that which comes from the Pot-ashes. But he that knows how to use this Nitre, for the concentrating of Metals, (concerning which the three following parts of this Book shall treat) will not have any cause of fear, that this Nitre will lie on his hands and yield him no profit.

By what hath been said, the well-minded Reader will easily perceive what vast treasures are oft-times before his eyes, and through ignorance lie as yet unknown, and not used to advantage. What man knows God's end, in producing to light such great Mysteries and Secrets of Nature, in this most filthy Dregs of the World? To give thereof a Reason, we will not tire our understanding, but give most humble thanks to God for such great mysteries that he hath revealed for the comfort of many men, and will pray unto him graciously to bestow on us his fatherly blessing, to the end that we may well use such great gifts so freely bestowed.

But now if any should be of the mind that it is wholly unnecessary, that this Art should be made publickly known, because that Gun-powder is made of Salt-petre, and that by Gun-powder many Cities and most strong holds are overthrown, and nothing is to be expected thencefrom, but Slaughters and Destruction: To such, I answer, That it was not for

this end that I disclosed this most great and most profitable Art, that by its base abuse I might help on these horrid Calamities; but my aims have been chiefly at this, if haply any new Foreign Enemies should invade our most dear Country (which is a danger we seem not far off from) we might be able to receive them with like Arms or Weapons, and by a just defence drive away such a Calamity.

And withal, that those most thick and vast Woods being despoiled of their thickness, may not for the time to come be a shelter for Thieves and Robbers, as likewise for wild beasts, all which oftentimes do much mischief.

And farther, That many thousands of Men may get their Food and Rayment more Commodiously and more easily, and may make good Gold and Silver from the unprofitable Wood. For by means of this Art, thousands of moneys may be gotten in our *German* Countries, without any hurt to our Neighbour. Nor is it needful to cut down any great Tree, for the superfluous Branches or Loppings, and the shrubby briary Underwood which is all about the Trees, and doth chiefly afford a passage to the Stags, and hiding places to other hurtful Creatures, will be sufficient for this kind of use or imployment.

The other Trees that grow up aloft may be preserved to build Houses withal, which may be employed about Hunting: And besides, when the Trees are freed from that thickness, and have thereby a free access of Air, they will the more easily dilate their Boughs, and grow up taller. And then too, those wild Beasts that are profitable, will (when such vast deal of underwood or shrubbiness is taken away) meet with fatter pasture, and with more plenty of Grass, and escape by having a freer Course from the

pursuing Woolves, which now they are letted from by those most thick Shrubs and Bushes. But yet if so be that in such places in which is such a deal of Wood, and to no man useful; a good part even of the great Trees should likewise be cut down, and used about this Artifice of ours; yet notwithstanding there would not arise to the Possessors thereof any loss, but much Profit; and when all's done, there would be yet remaining a huge multitude of Trees. Consider I pray those most spacious Woods the *Arduenne*, *Ottonick*, *Semane*, and *Bohemian* Woods, and many others which the Countries in *Germany* are cloathed (or environed) with.

Can it be imagined, that they can at all be lessened by the Glass Furnaces, or the melting of Minerals and Metals.

These places that are one year bared by cutting down the Trees, you shall see in few years covered over again, by the benefit of nature, with new Trees; so that it cannot possibly be, that though even a very great many Presses should be used to press the Juices out; such a vast immenseness of Woods should be exhausted, and make any sensible diminution of the Wood.

But now, if any one shall believe these writings of mine, and shall, after the afore-mentioned way, set about the Concentration of Wine, or Corn, or Wood; I do faithfully affirm unto him, that I have in this Book openly proposed the very naked Truth, without any disimulation, and have not omitted any thing save the revealing of the Presses, which for certain causes I conceal.

And therefore I certifie every one, that I will not as yet divulge this most wonderful secret, of thus-boiling Nitre out of the Juices of Wood, or else I

would have described the Press too. Besides, though a man should even see the Press, and know how to make it, and were ignorant of the purification and concentration of the Juices, he would not bring the Art to effect; so that, without my instruction, the work cannot so easily be made publickly known. And though this seems to be a thing so mean, yet this squeezing out of the Juices of Wood, is far beyond (or richer) than the operations on Wine or Corn. But I doubt not but that many, well considering of this unheard of, and very gainful Artifice, will begin to think whether or no good Nitre may not likewise be gotten out of other Subjects easie to come by. Now then I must methinks needs instruct these.

The common Fossile Salt, and Sea Salt may by the benefit of this Art, be also turned into Natural Nitre; but I judge it needless to speak more of this, for as much as that which I have already mentioned concerning the Wood seems abundantly enough. Breifly, God doth in all places set before our eyes His Omnipotency, where he gives not Wood, there vouchsafes He Stones and Bones, out of which Nitre may as well be extracted, by those that are skill'd in this Art, as it may out of other things. And where Fire is wanting, there is Water however. But I know that it is certain, and past all doubt, that by the certain experience of Art, plenty of good Nitre may be made out of Sea Water.

Now if any shall object and say; Thou affirmest that Nitre is to be found in all places of the World, but especially in Wood and Stones; but yet, that there are many places which have neither Wood or Stones, & have only a Marshy Moorish Soil, which brings forth Grass only: By what means can Nitre be there, or in what things, or what places should it be

sought for, thinkest thou there?

I answer; I have already, in what hath been said afore, confirmed, that Nitre may be drawn in large quantity even out of Grass; but verily there's no such need here of so doing, to rob the beasts of their food, and to use the Grass about Nitre-making: For the Cheese and Butter that come from the Grass, will easily yield more than the Nitre that's made thereof, would; God deals not so unjustly or unwisely with the Creatures as to give his blessings with a liberal hand to one, and take the same away from another: No, no; The Treasure of his Riches is inexhaustible, and he gives his Creatures largely to partake of them; nor doth that axiome (or maxime) which is so very usual in this perverse World, prevail at all with him, *viz.* The fall of one is the rise of another; but his will is, that all should have their necessaries abundantly supplyed, that every one should have enough, and that every thing should come to perfection. Therefore it is not at all necessary, that Nitre should be extracted out of the Food which the Beasts live on, because it may easily be extracted out of other Subjects which bring not any profit to Man or Beast, and this in great quantity too. For in such plain low Countries and moist watery grounds, where you shall not meet with either Mountains or Vallies, or Stones, or Wood: The most gracious God hath, like a provident and wise housholder provided for the inhabitants, giving them a certain kind of earth inlaid with many Roots and Fibers that grow therein, which the *Dutch* call *Torf*, we *Turfs*, the which they use instead of Woods, to boil with, and about other necessary uses; so that they may easily be without the wood, which is yearly brought them in such vast quantity out of other Countries. Now these same Turfs contain in them the like Essential Salt as Wood

does which Nitre is extracted out of.

As concerning Stones, they do not in those places shew themselves to sight (as lying deep) if you except such as are burnt (or Bricks) and which are brought hither to build houses withal, yet God hath bestowed on them a matter sufficiently apt to make Lime withal, so that they may be without, even Stones themselves. The Shell-fishes of all Sorts (serve to this work), and sometimes the raging of the Sea, drives the Fishes shells ashore by heaps, and like little hills, the which being carryed by the Inhabitants into the Cities and Villages, they put them in the Lime-Kilns, and reduce them by a strong fire into good Lime, and that by means of the Turfy fireing we mentioned but now; so that I do not see any reason why, in these Countries that are destitute of Wood and Stones, there should be found less Salt-petre than in others, in which huge quantities both of Wood and Stone are found. Nay, rather I affirm, that there is more there, than is in almost any Country of *Europe*; for do but compare the price of Turf and Wood, the Wood is dearer, the other cheaper; besides the Wood is harder to press out, and this yields its juice more easily.

So then, from all the foregoing demonstrations I absolutely conclude, that there is not any place in the whole World, wherein great quantities of Salt-petre may not be made.

And if I should say, that there is not to be found in the whole world any places in which Nitre may be easier and plentifullier made than in the low Countries of *Germany*, as *Brabant*, *Holland*, *Zealand*, *Flanders*, *Frieseland*, the *Groningen Fields*, the County of *Emdane*, and all those Countries which run as far as the *German* and *Baltick* Sea, in this their moorish

kind of ground; verily I should not speak untruth, but if need were, I could witness it of a certainty.

But lest my Writings should remain too obscure and unknown to such as are unskilled, and that such may not overmuch torment their Brains by unnecessary Pleadings how this may be effected, I judge it altogether necessary openly to confess the Truth before every one, and say, That Nitre or Salt-petre, were but its true use known, is justly and worthily to be accounted of as the greatest Treasure of the whole world, as being a thing by the help of which, good Health, Honours, and Riches may be purchased; and this we shall confirm in the three following parts. If then that this be granted, then this also will be yielded too, that the Subject-matter out of which it is extracted, is not to be despised, but to be highly valued; and therefore ought Wood and Turf to have their due Honour given them, concerning which, I have by many Arguments affirmed, that the one of them is every where in the upper *Germany* in great plenty, and the other in the low Countries of *Germany*, (nor doth these at all come short of the others) and that both may and ought to yield Nitre. Besides, not only the bare Turf is hereto useful, but likewise the hitherto thrown-away ashes, which are every where cast out as unprofitable.

NB. They are not useful in washing, as wood-ashes, with which the Laundresses make Lyes, and being they are not, they are thrown away as good for nought. But yet there is in them a great quantity of a certain salt, which being inverted by Art, passeth into Nitre; therefore through meer ignorance is there cast away, together with those Turfy ashes, a vast quantity of unripe Salt-petre, from whence a mighty profit might redound to those Countries, but being

improvidently thrown away, is meerly lost. But yet I would not have any imagine, that the Salt which is made of the Lee of Turf-ashes, is presently Salt-petre; no, for 'tis needful that the subtilty of Art be first thereto used, afore such a Salt be brought to that pass, as to burn like Salt-petre: But yet care is to be taken, that that Art become not common, for then so Noble a thing, and so profitable to our Countries, will be known by Enemies as well as Friends; which to prevent, it must be warily handled, and the principal work here requisite is this, *viz.* That it may not be published so imprudently, as to render the ungrateful and unworthy partakers of the same, as well as the thankful and worthy ones.

By these things here spoken may every one see and gather, that God is no respecter of Kingdoms and Principalities, and provides for some better than for other some; all Men are His Creatures and Heirs of all His Goods, if so be they be but willing, and do not stubbornly oppose and slight the Divine Grace, and do not wantonly cast it away and neglect it: Concerning which we shall speak more in the following part, touching the Concentration of Minerals.

This we must yet farther add, *viz.* That common Salt-Nitre is in all Coasts, in all Tracts or Continents, and in all Countries; yea, even in all those places in which there's neither Wood, nor Stones, nor Leaves, nor Grass, nor Earth, nor any bottom of Earth: As for example; Near *Greenland*, where the Sea is said to have no bottom, where the Whales are caught, and which do greatly inrich the Merchants with their fat or oil: Did they but know, that the remaining Flesh and Bones were even yet of great use, and knew they but how to turn them into Salt-petre, they would

preferr it far before their Fat, for the sake of which, so much labour and trouble is undertaken; for in the flesh of one Whale only (which as it is, is not at all profitable to any man) I dare say, that there may be found 20, 30, 40, 50, yea, sometimes 100 Centenaries, or hundreds weight of Salt-petre. And so likewise the Intrails of the dried Stock-fish that are caught in *Island* and *Norway*, should I affirm, that they would even almost excel the Fish it self in value, I should not be deceived. I find no difficulty that might hinder me from affirming this to be agreeable to the Truth.

Do not the Salt-petre-men preferr the Nitrous Earth that's found in old burying places (if they can have it) far beyond other Nitrous Earths? And this among others, that most excellent Examiner of Metals, *Lazarus Ercker*, in his Book of examining of Metals, affirms, and gives this Earth the chiefest place. Nor is it to be wondered at, that of late in *Poland*, towards *Muscovy*, where formerly great Battels have been, and many thousands of men slain, and by reason of the multitude of them, have (after the Battel) been thrown into deep Caverns of Mountains for the easier burying them) there hath been a great quantity of Salt-petre extracted out of the Earth. Were there not gain and profit to be gotten, those men that are imployed in the extracting and boiling it, would not lay out so much Money on unprofitable Ashes of Carcases.

But to pass this by, let any one make but this Experiment: Fill some Vessel with Bulls or Ox-blood, and put it in a warm place till it putrefie and be turned as it were into Earth; then extract a Lye out of this Earth, and boil it so long, till a little skin appear on the top, then lay it by in a cold place, to shoot

into Crystals, or little Stones, and these will be true Nitre.

NB. There is another and more compendious way of extracting Salt-petre out of the blood of Animals, which belongs not to this place to treat of; let us but compute the account a little. If there are yearly kill'd in some great City some ten thousand Oxen, besides Calves, Hogs, Sheep, and Goats, and the blood be cast away as unprofitable, [*now an hundred weight of blood yields some 5, 6, 7, or 8 pound, or more, of Nitre.*] the question is, How many Hundreds of Salt-petre is lost? That this may be the more clearly evidenced, *viz.* That there is much Salt-petre in all Beasts, Fishes, and Birds, take another Experiment: Let a Beast, Bird, or Fish be laid in some warm place, where no Rain comes, to putrefie, out of the Carcass there will come Worms; of these Worms or Maggots take about one pound, more or less, put them in a Glass with a narrow neck, stop the glass with Paper only, and set it at the Sun, but not too hot, and in a few daies the worms or maggots will be turned into water; then pour out this water into a Copper Vessel tinn'd over, clarify it with the whites of Eggs, as Vegetable juices are wont to be clarified; then evaporate the clarified Juice, by little and little, by decoction, till it be covered over with a skin; as we have taught you in the Vegetable Juices; then set it by in a cold Cellar, and there will shoot good and natural Nitre, but especially if that Liquor shall have stood a while afore in the air.

The self-same Experiment may any one make with other Vermin that arise from Flesh or Cheese, and he shall find that even living Creatures have Salt-petre in them: so then there is nothing to be found, wherein that Universal salt of the World is not seen

to be; but in some the salt doth sooner put on a *Salt-petre* nature, and in others it is already made *Salt-petre* by Nature.

Let this serve as an example, *viz.* The Essential or Universal salt of Vegetables, Animals, & Minerals, is indeed in its own nature nitrous, but it does not conceive any flame afore it has attracted life and flame from the Air. Further, one salt attracts that Life sooner and willinglier than another does, according as it is by Nature framed. By how much the more volatile and urinous the salts are, so much the sooner do they change themselves into Nitre; and by how much the more biting and more corrosive, so much the more difficultly and slowly do they put on the nature of *Salt-petre*. But because Nitre is a salt that partakes of both natures, *viz.* of a Urinous and Corrosive Nature, and is compounded as it were of both a Urinous and a Corrosive Salt, therefore by the help thereof one skill'd in Nature may easily help the salts, and make of them whatsoever he pleaseth. Nor is there in the nature of things any salt, but may by the help of Art be turned into Nitre; but especially those salts which are sublimed by fire, and are elevated by the force thereof; as likewise those that are in the Urine and Excrements of all Animals; yea more, Animals, Vegetables, and Minerals themselves do easily assume the nature of Nitre: This now is the first degree of salts. Another degree of salts are those that are somewhat fixer, (as the Sons of Art call them) and are such as are left in the fire, from Vegetables, Animals, and Minerals: These do more hardly pass into the nature of Nitre; but the hardest of all, are those salts which are in the third degree, as common salt, Sea-salt, Mountain or Fossile salt, Alume and Vitriol; for by Art are even these brought to that state, as to pass into true Nitre, but harder

than the former, for they need a longer time for transmutation, than the abovenamed flying, volatile, and urinous salts. And therefore I would not have any of you to opinionate, that when I say in my Writings, that this or that salt may be converted into *Salt-petre*, assoon as ever it is extracted out of the *Lixivium*, or by barely calcining with fire, that (I say) it should presently be true burning *Salt-petre*; no, there is a yet farther time thereto required, whereto it may attract its life and soul out of the Air, and become burning or inflamable.

Every common *Barber* and mean-pated fellow, knows that the most *Salt-petre* hitherto made, hath been boiled out of a Lee, drawn out of the Earth taken out of old stables, wherein Sheep and other beasts have stood. And why, I pray, out of the old standing places of Sheep, Oxen, and the like Cattel, and not likewise out of the new? It is on this account, because old Stables do not only in *long* Process of time imbibe more salt out of the Excrements and Urine, and consequently yield more Salt-petre; but also those very salts (that come from the Excrements of the beasts) and which is the main thing, have in long process of time received their soul or life from the air, which new salts have not as yet attained unto: For let any one boil, and try his conclusions on the fresh Dung and Urine of Animals, as much as he list, they will never become Nitre, unless they draw their Life out of the Air. Let any one take some good Salt-petre, and mix it with Earth, and destil off the Spirit in a Retort, there will come over into the Receiver such a sharp and corroding water, as will dissolve Metals, Stones, and all other even the hardest Mercurial Bodies, and yet the Salt-petre was not corrosive before, but it hath gotten that degree of corrosivity from the fire's operation.

Contrariwise, let some good Salt Nitre be taken, and be calcined in a Crucible, with burning Coals or such-like other matters as will burn or calcine it: By this operation it will be changed into a very fiery and fixt Salt, but not so corrosive, and thus it will dissolve all Fat, Oils, Greases, and sulphureous Bodies, which thing the former corrosive Spirit will not do; for such bodies as are dissolveable by this fixt and urinous Salt, the former acid Spirit leaves them untouch'd; and on the other hand, it will dissolve those bodies which cannot be dissolved by the fixt Salt, and yet are they both extracted out of one and the same Subject, by the help of the fire. Hence may it easily be conjectured, that this is an Hermaphroditical Salt, and partakes of both natures, seeing it puts on both (or either) of them; for the Philosophical Maxim witnesseth, that every thing hath its Original out of that into which it can be changed and resolved.

Now when I pour the acid Spirit that destilled over into the Receiver on that fixt Salt again, they are both of them divested of their nature and property; the Spirit loseth his sharpness and acidity, and the fixt salt puts off its fiery nature, and so they both become again an Hermaphroditical Salt, but yet not presently, but 'tis necessary to allow them some time of standing together in the Air, whereby they may receive that life and that burning nature which the Fire hath deprived them of. But yet notwithstanding, this comes sooner to pass in this, than in other contrary subjects, because these two Contraries have heretofore already been one Salt-petre; for such as never have been Nitre, but are hereafter to be so, require a longer abode in the Air. These instructions we give to those that might haply think that Salts may be animated without the help of the Air.

And now, that I may perfectly demonstrate that Salts do get their life out of the air, without any encreasing in weight thereby, and not from elsewhere, I will give you this following example. Take 1 *l.* of Honey or Sugar, and let it be dissolved in ten pounds of Water, and let this Water be set for some weeks in a warm air, the Honey or Sugar will be as a magnet to this Water, and will by attracting a life out of the air turn it into sharp Vinegar, and that without any thing at all encreasing the weight of the same. By this means Water, by the addition of Honey, Sugar, Malt, or any other Vegetable Juice, will, by the operation of the hidden and attracting essential Salt, pass together with it into excellent Vinegar. But now some or other may imagine that the Honey, or the juice of the Fruit and Corn, have in them an hidden acidity, which by the help of the warm encompassing air, hath revealed it self, and so did not attract its birth out of the air: But I will shew you the contrary, as follows: Take a pound of Honey, Sugar, or some other Vegetable Juice, and force it over in a Retort into a Receiver, and you will find that there will destil over 10 or 12 lots (or half ounces) of insipid Water, and so many of acid water; the remainder is a dead ashes, and have nothing in them; the Vinegar and Phlegm that ascended, will not yield one pound of Liquor, and the Vinegar it self, with its acidity, will scarce be so strong in taste as those ten pounds of water that are turned into Vinegar by the air.

This now demonstrates, that there was not in the Honey any more acidity than what was thence drawn out by the help of destillation, for the remaining ashes have not any taste at all. But put case that the acidity which is driven out of the Retort into the Receiver by the force of Fire, should be as sharp as

Aq. fortis, (when as tho' it is scarce as sowre as Vinegar) yet would it hardly make ten pounds of Water so acid as to be compared with the other which is made by the essential Salt and the Air; so that it is evident that the acidity (as being a life) is drawn by the Magnetick Virtue of the Honey out of the air.

But as touching this Essential Salt of Vegetables, its being a Magnet, to extract an acetous spirit out of the air, and communicate it to the dead water. You are here well to observe, that the universal spirit or soul of the World may be drawn out of the Air many and sundry waies. In the aforementioned Example of Vinegar is a spirit extracted, which is fit for the converting of Vegetable Liquors into Vinegar. In Hermaphroditical salts, the Universal Nitrous spirit becomes burning, as in Wine, Ale, and Metheglin. All these are so made by the means of air, without which no Wine or Ale can ferment, and without fermentation it is impossible for a burning spirit to be generated; which said spirit is easily afterwards turned into Vinegar, and this Vinegar into Nitre, and this Nitre again into a burning Spirit or Vinegar; for every Life is of one and the same original, and may by the benefit of Art be changed out of one nature or property into another.

So likewise the same is to be understood in the generation of Salt-petre, all Salts of Animals, Vegetables, and Minerals are dead, afore they get themselves a life after a magnetical manner out of the Air, and be made into Salt-petre; for amongst all salts, none deserve to be called a *Live Salt*, but that one of *Salt-petre*, which by the Philosophers is called the *Watchful Dragon*, which likewise at the beginning was dead, but hath got himself a Life out of the air.

By all which it is most clearly manifest, that the life of all things ariseth out of the air, and that those Creatures which come not into the air want Life and that such things as already have life, are choak'd and die if the air be taken from them. Hence comes the death of all things, by a suppressing or taking away of air, (in which air the Life of all things consists) what way soever it be done by, as the aforesaid example of the Vinegar teacheth; for if Honey or Sugar were not made thin with Water, there would never have hapned that changing into Vinegar. So likewise *Grapes*, *Apples*, *Pears*, *Barley*, *Oats*, *Wheat*, were they not moistened with water, but remained dry, they never would get the nature and property of Vinegar, and that for this reason, because the air could never infuse its life into a dry and shut up body.

This they well know who are imployed in making a quantity of Vinegar; and upon this account do they in Summer time set their Vessels open to the Sun, and in the Winter, they keep them in warm stoves near the fire, and both afore and behind, and at the bottom do they make holes to give the Air entrance, that so they might the speedilier promote the changing of the Wine, Ale and Metheglin into Vinegar.

They likewise know this too, that even strong Vinegar if it be a long time shut and kept from Air, corrupts and dies. The which thing, seeing it is to be as well understood of other Subjects, as of these here, *viz.* Salt-petre and Vinegar, we may affirm thus much, That by how much the more of warm Air comes to the Wine or Ale, so much the sooner will they pass into Vinegar. And by how much the more of warm Air the Salts draw, so much the speedier

will they draw a Life thereout-of, and put on themselves the nature and property of Salt-petre. This is the reason why the Salt-petre boilers do sometimes turn or dig up the Earth from whence they have had Salt-petre, and moisten it with water, that so the Air may the more commodiously penetrate that Earth by its operation, and infuse Nitre thereinto. But yet this business goes slowly on, and may be compared with that where a man presseth out Grapes or Apples a little, and then exposeth those Reliques of the press'd Grapes or Apples to the Air, or else grinds Malt somewhat grosly and moistens it with water and so sets it by that it may be endued with the nature and virtues of Vinegar: It would indeed come to pass, but yet much slower than if Wine, Ale, or other Drinks were set by so, without the huskiness or bran: The same is to be observed in the making of Salt-petre. By how much the more, the Air toucheth the Salts, so much the speedier will it reduce them into living Nitre. This may be seen in old walls that are built in moist places, you see how the Lime sprouts out and is converted into Salt-petre. We see not the same thing done in the inside of the wall, where the Air can cannot penetrate into it. Hence know I of a truth, that it is not the husks of the Grapes, nor the husks or bran of the Corn grows sour, but it is the thin Juice or Liquor that is either pressed out of them, or extracted with water. And I likewise see that 'tis not the Ashes, nor Calx vive, nor the like calcined things that becomes Nitre, but only the Salt that is hidden in them. Therefore seeing that all calcined things being moistned with water and for a long time exposed to the warm Air do extract a Life and become Salt-petre, and that the Ashes and Calx are like a dead Earth and never yield Salt-petre, but

remain a dead Earth. Likewise, forasmuch as such Earth doth not at all conferr ought to the generation and making of Salt-petre, but is rather every where an hindrance thereunto, whereby the Air cannot associate it self to the Salt; therefore do I separate the earth, body, shell, and useless garment, and keep the Salt, and I introvert it by the Air and turn it into Salt-nitre, but yet not without the addition of Water, in which the Salt is dissolved and rendred more fit for extracting a Life out of the Air; for otherwise should the Salt remain dry this transmutation would be a tedious while a bringing to the desired end.

If therefore the Salts that are prepared by the fire are dissolved in water, and the water be together with it kept by peculiar Instruments in perpetual motion, and some heat be also thereto adjoined, so that there be not the least Atoms of the Salts to be found which have not the uncessant penetration of the warm air, and which are not animated, (because the warm air and motion do in all places touch and vivify the Salts): Such an operation as this does more in four Weeks, than if the Salt lay in the heaped up Earth and open to the air (far longer) wherein it would not in a whole years time attain to so great a change. But this perpetual agitation and heating consisteth in a certain wooden Instrument which may of its own accord by an unceasing motion heat the Salt-water, so as that every Week a growing alteration may be evidently seen and perceived. It is not of any great charge, and one may get ready as many Vessels to be filled with Salt-water to make Salt-petre with (as he pleaseth) for one Man can manage an hundred of them or more and conserve them in continual heat and motion, so that a Man may keep such an Art secret as long as he pleaseth. And as concerning the ordering the salt by the help

of the fire and getting it a magnetick and attractive faculty afore it be dissolved in water to be put into the Vessels; and also how the Vessels are to be prepared, this cannot be conveniently declared in writing, but it is expedient that as well the manual operations requisite for the endowing of salt with a magnetick faculty, as the Instruments necessary for the turning it into Salt-petre be also well lookt into, with all the appurtenances thereto belonging. Any one will easily comprehend them all, and be able to imitate them; yea far easier than any gross or great work, and it may be improved in any subject whatever. It is not any sordid kind of operation, but pure and clean, it needs not any making of Lixiviums, nor any decoction, nor any evaporation, but perfecteth it self without impediment or retarding the work, and coagulates the Salt into Nitre. Verily it is a most delicate and most profitable invention, from which many others may have a beginning and flow.

Thus have we declared and proved that the soul of the World vivifying dead salts, and turning them into Salt-petre, adds not unto them either weight or encrease, and yet nevertheless it is of such abundant efficacy and power as to reduce them all to Life, which Life is no other thing but the little Bird of *Hermes*, and easily admits of being esteemed for the most noble amongst all the Creatures GOD hath made, set aside but the soul of Man, and may by the help of Art be again extracted out of the Salt-petre. But that I may mention the thing more openly and more clearly; I say, that the salts must (by the help of Fire and Art) first get a magnetick and attractive power and faculty afore they can draw a Life out of the air. Now then, after that the universal Life of the World is caught and fettered as it were by the salts,

and hath turned the dead salts into living nitre, yet that life lies hidden in that Salt-petre invisibly, and can but a little or scarce any thing at all shew out or display its virtues by reason of the Gross body of the salt.

NB. If so be that any one shall but know how to draw out this Life again out of the Nitre, and bring it into a body, and make it visible, he shall have a thing so admirable that he'll scarce find the like (as I believe) in all natural things. For there is such a sweet and red Liquor, as to sight, thence had, that one only small drop will tinge a thousand parts of water with a Golden colour: which (said Liquor) I have not as yet brought to a constant or fixed Medicine, but do make use of it in Medicine (as it is) and I find in it things wonderful. But this little Bird (as far as I know) cannot be again extracted out of the Nitre by any other subject than with a net artificially prepared of Sheeps-skins.

Such a worthy thing as this is, do I rank in the number of great secrets and mysteries, and I suppose it to be that work which the knowledge desiring *Jason*, being holpen by *Medea* who was most skilful in the Chymical Art, took away from the Dragon, and called it the Golden Fleece: But I would not have any one perswade himself that I speak here of such a Tincture as is extracted out of fixt Nitre (and likewise the same is extractable out of Salt of Tartar) by Spirit of Wine. No, that is no true Tincture, but the Spirit of Wine is somewhat altered and tinged by the fixt salt. But that Liquor of mine is the true, occult, and inmost Tincture, Virtue, and Life of the Nitre, and is of a golden Nature, but plainly flying and volatile, one drop whereof doth so gild an whole Imperial, as if it were gilt over with Ducket Gold. This Tincture

cannot be changed or altered by any contrary Menstruum, be it Corrosive or Urinous, no nor by *Aqua-fortis*, or Liquor of Salt of Tartar; the like of which is scarce to be found in all nature.

For if there be a most delicate colour drawn out of the Vegetables, as Cochenele, Saffron, and such like, by the help of the Spirit of Wine, and there be dropt therein but one only drop of *Aqua-fortis*, the colour will presently turn pale, and if you add more, it will vanish for altogether. Or else if a drop of the Liquor of Salt of Tartar should be put therein, it would presently change colour and become duskyish. But now, this true Tincture of Nitre, or Soul of the World suffers not any change from either of the contraries. And should one have even a metallick Tincture, or extract even from Gold it self, yet would it not stand in this tryal, but would be precipitated either by the acid or the fixt salt, and separate from the Menstruums. But ours doth constantly abide in every trial, and resists both the contraries.

I do therefore repeat what I have often said, that there is more lies hidden in Nitre than many thousands of Men can perswade themselves of. But because it is so vile and abject a thing, no body thinks that there lies hidden any thing of good therein. But do but read the chiefest of the Philosophers, and you shall therein find that they do enigmatically point at Nitre, and do call it the Dragon which is to be slain by its Brother or Sister afore it parts with its Treasure; But enough of this.

The things hitherto mentioned, have I produced for this end, that my Neighbour may be the better certified concerning them. All the Philosophers Books are full of this thing, amongst whom, *Hermes*, and *Basil Valentine* excel, who have written most

clearly. *Paracelsus* saith openly, Alchimy hath found it in Nitre. The late Philosopher *Nuisment*, hath published a Treatise of the Salt and Spirit of the World, and is verily most worthy the reading, which (said Book) I commend to the Reader that studies these things. Therefore do I here again repeat what I have so oft reiterated, *viz.* That Salt-petre is the most admirable, the most excellent, and the most powerful Subject of the whole World, whose wonderful properties cannot be enough search'd into. But because it hath its rise from dung and putrid rotten things the greatest company of foolish ones do despise it, but the small company of Philosophers and Wise-men (who are those that know what admirable virtues it has) do most highly esteem it, and set thereon a great value. The well disposed Reader will clearly find more as to its virtue and efficacy, in the three following parts.

O thou the original of all good things, and Treasure of all Treasures, vouchsafe that we may well and rightly improve this earthly and fading Treasure, and may so search after, and use it unto the end, that we lose not the chiefest good, but may rather find and keep thee for ever.

An Admonition, adjoined as an Over-plus.

In the first Chapter of this first part of the concentration of things, have I plenarily manifested, by what means, new Wines and Musts are (by the help of an Artificial condensation) to be brought into a narrow compass, that so they might be carried into far remote places wherein there are no Wines, and may there be sold to great profit. But yet I forgot to shew, by what means the savour which the winy Juices contracted in their concentration, is wholly to

be taken away in the fermentation when they are again dissolved in water, that so the Wines made of those Juices may not have any untoward and unpleasant taste. 'Tis an Artifice without which no man can easily, quit himself in this Art of making Wine. But that I may certify every one hereabouts, the Medium (or Basis) necessary about the precipitation in this work is no other thing but common *Sulphur* excellently well purified, a little portion whereof (according to the nature and property or disposition of the Juices) is to be hereto added, which must boil up (or ferment) with the Wine, that so it may draw to it self all the filths, and all the strange odour, and savour or taste in the fermentation and by precipitation cast them down to the bottom, which being done the Wines become sweet, clear, and get a good savour. Furthermore it is to be known by what means (seeing that there are many fæces and defilements that will separate themselves out of those kinds of Wines as well as out of others, and settle to the bottom) even they are to be put to some use, that so there may not be any loss, but that the gain may be by so much the greater. Divers ways are there of making profit from them; as for instance, The remaining Wines may by pressed out in bags, or else they may be turned into Vinegar, or a spirit may be thence destilled, and the remaining gross matter be boiled in water, and the Tartar therein dissolved, and prest out in bags, that it may so shoot into Tartar. But as touching this expression I have taken care to have a peculiar Book published at *Norimberg*, (viz. *The Treatise of the Lees of Wine*.) So that it is wholly needless to make any mention of the same, in this place. The Courteous Reader may use it to his occasions, as being such a Book, in which he will find the said pressing out the

Wine and Tartar, and also the making of Vinegar, clearly described, with all the circumstances thereabouts, and without all question if he rightly understands me, and sets about the work, he will do himself a great deal of good.

NB. But if so be that any shall know the Art of turning the Tartar of those Fæces into Salt-petre, (and such a thing may be done and that in a very short time) he will get twice the profit, that is to be gotten by making Tartar of them; forasmuch as he need not put himself to the inconveniency of pressing them.

In the second Chapter of this first part where mention is made of the concentration of Corn, there it has been alleadged that the remaining husks or branny parts which remain after the extraction of the Juices, may be made to yield as much yea more Moneys than will pay the costs about the Corn. But it is well known, that those reliques that are left in your boiling up of Ale, are improved to fatten Beasts with. If now a *Medimnus* (a measure of about some 6 bushels) of Corn doth cost half, nay even a whole Imperial, those reliques (that are left of it in working) can scarce cost less than one eighth part of that Imperial. And now out of such a *Medimnus* or measure of such reliques, they would very hardly when turned in the Beasts, into nutriment, have made in them two pounds growth of flesh, the price of which (said two pounds) would not amount to the eighth part of the said Imperial: Whereas now, if those reliques were handled after the afore-mentioned way of reducing Wood into Juices, they would easily yield as much, or more Salt-petre than the price of the Corn was at the beginning. So that here's an enriching Treasure offers it self to the pious

and diligent Housholder, whereby he may do good to those in need.

In the third Chapter of the first part, is mention made only of the Concentration of Wood, of the pressing the Juices out of the Wood, and of the making Nitre; But because there is not every where such great quantity of Wood, as to imploy it to the making of Salt-petre without omitting the more necessary use of it, yet notwithstanding the case may be so ordered as that a great quantity of Salt-nitre may be made of the Leaves of the Trees and the Grass that grows under the Trees, and there's no need to cut down the Trees, if a Man has no mind so to do. Besides too, in such places where there's but little Wood and much Corn, even the very stubble or straw (of the Corn) is fit enough to be made into Salt-petre. So that there is no place where there is not matter found for the making of Salt-petre.

And therefore I cannot forbear but must needs teach all pious Housholders (whether they have their Houses in Cities or in Villages) a certain easie Artifice, by the help of which they may gather a Treasure for their Children, without any labour and costs, and such a one as Thieves can never rob them of.

And now, seeing I have revealed in this small Book, for the benefit both of Rich and Poor, high and low, three Artifices or Workmanships by which, Wine, Corn, and Wood may be made more profitable; but yet have not brought any assisting help to such as want both Wine, Corn, and Wood, I have judged it worth the while (that so even they who have nothing, and yet nevertheless desire to provide for their Wives and Children in some honest way) to bestow on them a secret Art, whereby they may seek

their advantage or profit. And I hope the thing will redound to the Honour of God, and to all our Healths.

Besides, I will shew a way to such as have no inheritance left them from their Parents, nor have any thing come to them by Marriage, by what means they may without labour and trouble get a Treasure for their Children.

First of all, Let such a one take care to have some shade or hovel made, to join to that side of his dwelling that lies in the middle 'twixt the North and the East part of Heaven, or some other more convenient place, so as to admit the Sun and Air to it, but to keep off the Rain. Under this Pent-house or Hovel, let him dig a large Pit, and with the Earth he digs out let him make banks round the Pits-mouth that so it may keep the Rain off of every side. This done, let him each day in every year, or whensoever he can conveniently carry and throw into that Pit these following matters, so long till his necessity forceth him to dig all out again, and to see how much Treasure he hath gotten, even whilest he slept. Now these matters are, All sharp and bitter Herbs, growing in by places, amongst bushes, and in the way sides, and such as the Beasts feed not on, as *Esula*, *Cicuta* or Hemlock, Hen bane, Fumitory, the thick stalks of Tabaco that are thrown away in those places where it is planted, the hard stalks of Colwort, which the Beasts eat not of, and likewise all those things they leave in their Troughs; likewise Firr tops or Apples if you have them at hand; also the Leaves that fall from the Trees in Autumn are to be gathered; also Pigeons-dung, and Hens-dung, Birds and Hens Feathers; all the Ashes which Women usually make their Lees with, and other Ashes that

are not fit for that use, as also such out of which the Lixivium or Lee is already extracted; the soot of Chimneys, Hogs hairs, the horns of Oxen and Cows, and the bones which the Dogs eat not of. All these matters may he throw into his Pit, and that he may the sooner fill it, he may gather as much as ever he can from the bordering places, and throw it therein, that so in one or two years time he may with all those things fill up his Pit. Mean while he must pour into the Pit the piss gathered in his House, and that he may have enough he must also get as much as he can from his Neighbours, so as to keep the things thrown in the Pit in a continual moisture, whereby they may the sooner putrefy. In want of Urine, common Water may be taken; if Sea-water or other Salt-water can be had, it will be the better. Also the Brine of Fishes-pickle, and the salting or salt-water that Flesh is macerated (or pickled) in are of good use in this business; likewise the Blood of Oxen, Cows, Calves, Sheep, which you may easily have at the Butchers; all these things putrefying together do put on the nature and property of Salt-petre.

If now, all those matters in your full pit shall have well putrefied, then cease from pouring on any more moisture, and all the things are to be left so long till they are dried. And then if you need Money, let a Salt-petre maker be sought for, and bargain with him about the price of drawing out your Salt-petre by water, of making it, and selling it. This done, cast the remaining Earth again into the Pit, together with the remaining Lixivium that shot not into Nitre, and there leave it for a year or two, and moisten it sometimes with Urine, or if you have not this, with common Water. This Earth will again yield Salt-nitre, but not above half so much as at first.

NB. If you stand not in need of Money, let the matter lie, and as oft as it dries, so often moisten it again with the aforesaid moisture, that so the Nitre may more and more grow and increase. By this means shall such a one gather a secret Treasure, & shall not know almost how he came by it. If he needs it not himself, his Children will find it. Thieves & Souldiers will not steal it away. If one Pit be full then another may be made, that so nothing at all of those matters, which otherwise are most base, (but in this case most suitable) may be lost. Now if there were but only one in every Village that were appointed to exercise this Labour, there would be found out as it were in a small Country many thousand hundreds of Salt-petre, and so these matters still serving for the same use, there would never be any scarcity of Salt-petre. And now, Nitre being present, Gold and Silver are not far off. Let every one observe this, and esteem it. Men will sometime or other at last, become thrifty and wise, and will see what blindness they have been possessed with.

Give GOD the thanks, and be helpful to thy Neighbour. GOD hath bestowed on me, I bestow on thee, do thou likewise bestow somewhat upon thy Neighbour, and it will be well with us all.

THE SECOND PART
OF
The Prosperity of Germany:

Wherein is shewn,

By what means Minerals may be Concentrated by Nitre, and turned into Metalick, and better Bodies.

For the benefit of my Country, and of all such as affectionately and industriously follow after Metalick Affairs.

Friendly Reader,

I have taught in the first part of this Book, by what way the Vegetables, as Wine, and Ale, are to be concentrated, whereby they may yield more profit than hitherto they have done, and also, how Wood is to be reduced into Salt-petre. In this present Second part, shall be taught, how the Salt-petre is to be used, and how, by it Minerals may be Concentrated, and wrought into Metalick Bodies. And as to this Concentration, thus stands the case; that is to say, forasmuch as a good part of Minerals are of very little use, and lie neglected as things of no worth, and prove not profitable to any one, (whereas if there

were Men that understood but the Art of it, there might redound a great benefit to the Lands where they are). It hath seemed to me worth while to declare it to my Country, nor doubt I but that there will arise some diligent ingenuities, who will lay the thing to heart, and take care thereabouts, and will even set their hands to the work it self, and thence get much profit; which to me would be very pleasing and acceptable. Therefore (in the Name of God) will I set about the manifestation of the Gifts of God (which lie every where unknown, and wholly disesteemed, and which yield no Man any fruit) and lay them open before the Eyes of the whole World, that so they may be better known hereafter, and be of more benefit to the Country. And I beseech the most Wealthy, and the most Ancient Housholder, our most merciful Father, to bestow a Blessing, and good success on this my endeavour, that it may tend to the Honour of his most Holy Name, and the health of all our Souls. Amen.

Of the difference of Minerals, and what is understood by the Name of Minerals.

As concerning the word *Mineral*, why all Fossile and Metalick Mines are so called afore they have been wrought upon, and brought by the fire into Malleable Metals, I judge it but of small moment to make any tedious Comment thereupon; besides, others have long ago thoroughly treated of that, and yet it makes but little to the thing it self. But my purpose is (at present) to teach, what means such little esteemed Minerals may be made useful, and profitable by; but afore I begin this work, I will recite, and shew the many sorts of Minerals that there be; then next that, I will shew how, by the benefit of fire, and the hands of the Artificer, they

may be converted into better bodies, and become useful, and profitable for Mankind.

Under the Name of Minerals are comprehended, or reckoned these following, *viz. Antimony*, *Auripigment*, White, Yellow, and Red *Arsenick*, *Cobolt*, *Lapis Calaminaris*, *Zink*, *Bismute*, or the *Silvery Marchasite*, likewise the *Golden Marchasite*, *Pyrites*, or *Copperas* stones, *Vitriol* of various kinds; as also, its kindred, may be added to the number of Minerals. And albeit, that some do also referr Alume, Salt-petre, Sal Armoniack, Sal Gem, and others of that kind to the rank of Minerals, yet cannot I acknowledge them for such, or reckon them up amongst the number of the above mentioned, seeing there is nothing Metalline to be found in them: Such only therefore do I call Minerals, that have in them a Metalline nature, and which do admit of being joined with other Metals, and of being molten together with them in the fire, and out of which the known Malleable Metals, may be extracted. These are they which I intend to treat of, and will see, what good is thencefrom extractable.

And first of all we'll speak of *Antimony*.

Antimony is the noblest Mineral of all, not only because it doth for the most part contain Gold in it, but upon this account too, because more eminent Medicines may be thencefrom prepared for the use of Mankind. In the Mine-pits it has its peculiar Veins; that which is found in *Transilvania*, hath some little bigger portion of Gold in it, and is accompted of as the best in all *Europe*, next that is the *Hungarian* ♁, which likewise doth sometimes contain no contemptible portion of Gold; next is the *Fechtenbergick*, which is found at a small Town call'd, in the *German* Tongue, *Gold-Gronack*; the *Polonian*

sort, and that which is found in most places of *Germany*, contains but little Gold, or none at all; but there is some which has much Silver in it, and (for the most part) is neither wont to be used, nor desired, or sought for, save by the Letter Founders, and these use it to make their Matters flow. Also many do use it (*viz.* ♁) in Medicine, and do much good therewith, but it hath certain Enemies who are none of the wisest, and so is hated, and rejected. But yet there lies in it more hidden good, than all its Enemies are able to conceive of, witness my *Panacea*, which is mentioned in the second part of my *Pharmacopœia Spagyrica*.

And *Basil Valentine*, certainly an excellent Philosopher, writ the Triumphant Chariot in its Honour, which is an exquisite Book and profitable to read.

But as concerning the way of making a Regulus out of Antimony, and as to the uses it serves for, that I have described in the fourth part of my Furnaces. Moreover, as to the manner of depurating Gold thereby, and cleansing it from all Heterogeneous mixtures, and as to the graduating of silver, thereby, that it may become Golden, all this have I spoken of in the Explication of my *Miraculum Mundi*; and as to what other effects may profitably be done, therewith in Metalick Operations, shall be shown, partly in this Treatise, partly in the third and fourth ensuing parts. As concerning the way of separating it in quantity out of the Ore, *per descensum*, is to be seen in *George Agricola*'s Book, that he wrote of the Metalick Art, and in others; nor indeed belongs it to this place to speak thereof.

Of Arsenick.

Arsenick likewise is a good Fossile, or profitable Mineral, and is put to many Uses. It also hath its singular, or distinct Veins in the Earth, whence it is taken; it is forced out of the Ore by Ascension, and Descension, and is purified for use: It is found white, yellow, and red. Also some silvery Minerals or Ores do in their solution, or melting; yield much Arsenick, which the Melters of the Ores do catch in Chimneys or Funnels made for that purpose, and keep it for use; concerning which, you may read in *George Agricola*'s Writings. So likewise, *Cobolt* yields Arsenick, and so do some Golden Minerals, or Ore; that which is separated from a Minera of Gold, *per descensum*, is very red, and auriferous; and this, those that deal with Metals, have experience of; which, if they separate not from the Gold Ore afore they melt it, it carrys away a great part of the Gold, and hides it in its Belly in the melting, so that they would not have so much Gold as there is in the Ore. For indeed, such a kind of Arsenick, is an unripe Gold, as shall be hereafter proved: So then, there lies more hidden in that Contemptible, and Venomous Arsenick, than any one will easily perswade himself to believe. There are also Medicines prepared out of it, but such, as serve only to be externally applied, in inveterate, and virulent Evils, as the Cancer, and Fistula. It is also used in Colouring and Dying Cloaths, concerning which, you may peruse my other Writings.

Of Auripigment.

This Mineral is in a manner of the same Essence that Arsenick is of; but this does not come forth of Minera's, or Metalline Ores, but hath peculiar Veins of its own, in which it is generated; it is an unripe Mineral, and doth for the most part also contain Gold. It is exceedingly Poisonous and Volatile, and

therefore it is but little used, save only by Painters. It can be fixed by Nitre, and it makes Copper white, and brittle, as Arsenick doth: And it suffers it self to be sublimed out of its yellowness, into Transparent Rubies, which are used for Ornaments sake.

Of Cobolt.

Amongst all the Minerals that are to be found *Cobolt* is the most poisonous; it's an unripe silver, and it ofttimes yields in melting good silver, yet one sort more than other; some also there is which hath not any Silver at all, and is used about the sky-colour'd Smalt, to help make it, with an addition of Fusile Sand, and Potters Ashes. But when they meet with that which has Silver in it, they separate it thencefrom by Fusion; besides, it may be so fixt by the help of Salt-petre as to yield permanent Silver, as shall anon be spoken of.

Of the Silvery Marchasite.

The silver Marchasite, or Wismuth, is a known Mineral; it's every where found to and again in the silver Mine-pits, as well as Cobolt is, but yet it is much more fixt than Cobolt; neither is it of so poisonous a Nature. It is gotten out of its Ore, or Minera, most easily by a small flame of wood fire, and is used by the Pewterers to make their Pewter hard, sounding, and fluxile. Likewise, out of its scoria or drossy parts, is the blue Smalt also prepared, which the Potters use to glaze their Pots, and the Glass-men to make sky-colour'd Glasses. It doth very frequently abound with much silver, and 'tis rare to find any that is wholly void of silver: And if it holds so much silver, as is of more value than the Marchasite can be sold for (as 'tis barely *Bismute*)

they separate it, if not, they leave it in it. For if an hundred weight doth not contain 20 or 30 Lots, or half Ounces they do not separate it, because the Marchasite will yield so much. But now, the Silver may be gotten out of the Marchasite, by Salt-petre, so as that the remaining Marchasite shall lose nothing of its goodness nor be at all spoiled, as I have shewed in the Explication of my *Miraculum Mundi*.

Of the Golden Marchasite.

The name of *Marchasite* is proper to every unripe Metallick matter (and is) of as many sorts as there are Metals; hereupon the matter which has Gold in it, is called the Golden Marchasite; that which has Copper, the Coppery; that which has Iron, the Irony, and so that which abounds with Sulphur, is called the Sulphureous Marchasite. But now there is Sulphur in all the Marchasites, and sometimes Arsenick too, but (the Golden ones) have more of Gold than the other Marchasites have; Besides, out of all kinds of Marchasites proceeds (for the most part) a Vitriol, which shews the nature of that Metal, which the Marchasite contains; one while Copper, sometimes Iron; 'tis rare to find a Marchasite that hath no Metal at all in it; if it hath nothing of Gold, Silver, or Copper, yet has it Iron, and gives out of it self a Vitriol useful for Dyers, and which such as prepare *Aqua-fortis* cannot be without.

Of Zink.

Zink is a Volatile Mineral, or a half ripe Metal when it is drawn out of its Ore. It is much clearer and brighter than Tin, yet not so malleable and fluxile as Tin is, and it is usually put to Tin to make

it brighter and harder. We have it not much growing in *Germany*, but great quantity of it is every year brought us by the Merchants out of the *East-Indies*. The way how to prepare it for Medicinal uses, have I described in the first part of the Philosophical Furnaces. It is a golden but an unripe Mineral, it gives Red Copper a Yellow Colour and turns it into Brass, as *Lapis Calaminaris* doth; and indeed that same Stone is nothing else but unmeltable *Zink*, and this *Zink* may properly be called a fusile Lapis Calaminaris; for as much as both of them partake of one nature. But with *Zink*, there is most an end conjoined Lead too, and then it is not fit to make Brass of, unless the Lead be first taken thereoutof; so it is at *Goslaria*, where together with the Minera or Ore of *Zink* is Lead also digg'd out mixt amongst it, and is called a Lead Ore, though there be contained in that Ore, four times more of Zink than there is of Lead, and yet they burn up the Zink for to have the Lead, which Lead hath some Silver in it. In the melting it flies away in fume, and it is a volatile and combustible Mineral, and sublimes it self up into the holes of the Furnace, whereupon the Melters or Founders are constrained to knock it off frequently, least it should too much lessen the Furnace; this matter they knock off, they call Calmei (which is Lapis Calaminaris) and which turns red Copper into Brass, with encrease (of its weight); and so verily by means of the not-knowing or being skill'd in this Ore, a great quantity is yearly burnt up and lost. Sometimes the founders do gather somewhat of the Zink, which is most excellently excellent; but that Ore might be melted with far greater profit, if they did not so burn up the Zink, and force it into fume, but seeing men are hardly drawn back from an old custom, it must be born with.

But yet (I say again) if that Ore were handled in a due manner, there would redound far greater profit thencefrom than now doth. Such a kind of Mineral as this is doth Westphalia also yield, which the founders there accompt for a Leaden Ore, because it has some load mixed with it, but when it comes to be freed or molten it goes (all) away in fume, and therefore they say, it is also a Calmei or Calaminaris Ore, and so it lies unused.

Of Calmei *or* Lapis Calaminaris.

Calmei Ore is digged out in many places in *Germany*, but there is none of such note as that which is found at *Aquisgrane*, for that is wholly void of all kind of Leadyness, and much different from that of *Goslaria*, or *Westphalia*; and therefore it is also very fit to make Brass of, which is there made in plenty, and farther, this has Gold in it, though not so much as to quit the Costs of separating it. But there is no Mineral richer with Gold than this, and could it but be ripened (and I doubt not at all of the possibility of so doing) a good deal of Gold might be drawn out from thence.

As concerning what else may be performed with that Mineral, I have formerly told you in my First and Second Part of Furnaces, nor is it needful to treat of the same thing more at large in this place.

Of Common Sulphur.

Sulphur or *Brimstone* is the most known, most used, and most combustible Mineral of all. As touching its uses in Medicine, and in Alchimy, about the separation of Metals; may you find something mentioned by my self, in the writings I formerly published, and in the writings of others too.

But at present we will only mind you of this, *viz.* That it is the very Foundation and Root of all the Metals; for tis rare to find any mine wherein *Sulphur* does not shew it self. Very many places in the World, is *Sulphur* both made and digged out of the Earth, in very great quantity, & that chiefly in *Island*, and in *Italy*, nigh to those always burning Mountains, *Heckla* and *Vesuvius*; it is also drawn out of Marchasites *per Descensum* in many places of *Germany*, so that enough of it may every where be had for a little money.

These are the chiefest Minerals that I ever knew of, and these are they which are commonly sought after, and applied to use. But now, besides these, there are so many various kinds of Fossiles and Minerals to be met withal, that one cannot reckon them all up, or give them peculiar Names. One contains Sulphur, and Arsenick, another, Cobolt and Sulphur; another Antimony, and Arsenick, and of that kind are there very many more. But yet those that we have reckoned up, are the most known, and most in use, and therefore shall at present be sufficient for us to speak of.

Having now taught what Minerals are, and which of them are most known & used; I will now teach, in the next place, by what means they may (by the help of Salt-petre, & of other Subjects) be fixed, concentrated, imbodied, or brought into Metals, so as to be rendred profitable for the use of Mankind, and which otherwise lie every where to and again neglected and, are wont to be of no esteem.

And as to the Concentration of Minerals, thus stands the Case with them; they are either to be fixed & subdued, as 'twere by the help of Salt-petre, that so they may not so suddenly fly away in fume in the

fire, and be burnt up, but may abide the fire and suffer themselves to be molten; or they are to be reduced into bodies by the help of Metals, that so they may come in use, and that by augmenting the Metals, as Lapis Calaminaris does, or they are to be purifyed, separated, and made better, as shall be mentioned of *Sulphur*, *Antimony*, and the others, that so those kind of Minerals of which there lies to and again, at present, great quantities, wholly neglected, and profitable to no body, may hereafter be of use and benefit.

And first of all, as to the fixation of the Minerals, the way of proceeding is thus, *viz.* The Mineral is to be powdered, and to be mixt with equal weight of burning Salt-petre, and so to be fired, that the combustible and volatile part of the *Sulphur* may be forc'd away, and the Mineral may afterwards brook the fire the better, and be molten and forced downwards (*per descensum*); which operation I have treated of in the explication of my *Miraculum Mundi*, and therefore think it needless to repeat the same thing again here. By this mean therefore may *Arsenick*, *Auripigment*, *Cobolt*, *Zink*, *Bismute*, and other Volatile Minerals be in some sort fixt by the inflaming and burning up with Salt-petre, so as afterwards to endure the fire, and to yield forth the good they have in them. There's also another way of imbodying Volatile Minerals, *viz.* by the benefit of Metals; if the Metals and Minerals are joined together in a due measure, and be likewise united together by the virtue of a Cementing fire; then doth the volatile Mineral penetrate it self into the Metal, and becomes Metalline, and doth also encrease the Metal, as is evident in Calmei or Lapis Calaminaris, which being joined with red Copper and cemented, enters into it, augments and encreaseth it, and

turneth it into Brass; whereas there cannot be any Metal educed out of the Calmei by the usual way of melting. In like manner may all Arsenical minerals be (by cementation) introduced into Copper, & made corporeal; and these do not colour the Copper yellow as Calmei doth, but make it white, nor is the Copper rendred maleable thereby but britle; but yet 'tis not without profit; for if that white Copper be handled after a convenient manner of taming or over-mastering it, then the Gold and Silver that was in the Arsenick, betakes its self into Regulus's, which are to be depurated in a Test or Cupel, or else by the help of Salt-petre; but there cannot any metalline body be made out of Arsenick, Auripigment, or Cobolt, by bare melting. The way of proceeding with it is thus; The Copper is to be cut into small bits, and to be moistned over with *Linseed* Oil, and the Arsenick, Auripigment, Cobolt or any other Realgar is to be powdered and strewed thereupon, and so a bed of Copper, and a bed of Arsenick to be put one a top of another in a melting Pot; then the Pot is to be well covered and fenced with Lute, and placed in a circulatory fire, and the fire is to be put nearer and nearer to it, until the Pot is through red hot, then let it cool, and you shall find that the Arsenick hath gotten ingress into the Copper, and makes it black and brittle. The Copper thus burnt, may be reduced into powder, and burnt with good Salt-petre, whereby the Volatile Gold and Silver which was contained in the Arsenick, is made corporeal, and abides as constant upon the Test as other fixt Metals do; so that by this means permanent and good Gold and Silver may be gotten out of every sort of Arsenick, Auripigment, Cobolt, and the other volatile, venomous and base minerals.

NB. This kind of operation is very dangerous to

those that are unskilful, and who being unversed in the Chymick Art, have not learned to take heed to themselves. And therefore it behoves every one to beware of doing ought rashly or heedlesly. He that knows not how to carry himself (or his business) warily, let him forbear to meddle at all with this labour or process: But as for one who is better versed, and pretty well experienc'd, he may set about this work safely and will gain by it: Because there is oftentimes found Arsenick and Auripigment that hath in it much hidden volatile Gold and Silver, and which cannot be retained in the common way of melting by Fire, but will totally fly away: But now if it be imprinted in the Copper by Cementation, and fixt in the same by Salt-petre, and then precipitated by means of Lead or Iron into Regulus's, it will render all that fixt which afore was unfixt and flying. But as concerning such a Cementation and Fixation to be done by Nitre, will be manifested by the following process.

NB. But you are carefully to observe, that one mineral must help another in the separation of their Gold and Silver (if you would undertake this Labour for profit): For so each will produce what it has in more abundance, and thou wilt have a greater reward for thy pains and costs. For example, I prove and try Auripigment or Arsenick, and find that it is auriferous, and I have a mind to perfect it and turn it unto my use; hereupon do I look for such Copper as is likewise auriferous, (and indeed there's plenty enough of such every where): Into this Copper do I introduce my auriferous Arsenick by Cementation, and that I may not need to cupellate (or blow off) the same upon a Test (for the very Labour of so doing will cost more than the gains will be of that separation) I do precipitate the Gold that is therein

into a Regulus, which Regulus being purified, I obtain the Gold that was contained in that Arsenick and Copper, neither is there any need of cupellating all the Copper. But that the precipitation of the Regulus may be the more commodiously done, I proceed on this wise. I find out some Antimony of a good sort, and which is of a Golden nature; likewise such Iron as hath Gold in it, both which, *viz.* the Iron and the Antimony, may easily be gotten, and then I set on the separation which I thus institute.

First of all I implant the auriferous Arsenick into the auriferous Copper (if such may be had) then reduce I these into powder, and fire them with an equal admixt weight of burning Salt-petre; by this means the Arsenick is made a little more fixt, and suffers it self to be the better dealt withal in the fire, but if you are well skilled in this kind of labour you may spare your Salt-petre and may melt down your Copper (burnt with the Arsenick and powdered) with an equal weight of Antimony. And if of its own accord it lets fall a Regulus out of it self, then there needs no precipitation, the Regulus may be laid by, and that which remains may be likewise precipitated into a Regulus with common Iron; and this (last Regulus) is also of use, as shall hereafter follow: But if not (that no Regulus falls) then that Mass may again be put into a Crucible, be molten, and a little Iron filings be cast in to make it settle; the which must be stirr'd about with a red hot Iron rod, and when it's well molten, 'tis to be poured out into an Iron Cone; which being cool, the Regulus may be knockt off, in which Regulus will you have the Gold that was in the Arsenick, Copper, Antimony and Iron. This Regulus must be cupellated either by Salt-petre in a Crucible, or with Lead upon a Test; which done, you will have the Gold that lay hid, and shut up in

the afore-mentioned Minerals.

But now, if one hath a mind to make that separation yet more compendious, and to have greater benefit thereby, he may add to that Copper burnt by the Arsenick, some Silver burnt with Brimstone, and so melt it with the Antimony, and by the means of *Mars* precipitate them into a Regulus, then the Silver will so much the better draw to it self the Gold out of the Arsenick and Antimony, and yield (in the separation) greater benefit.

NB. If so be a man be not skilful in this operation, let him forbear his Silver a little, and add some Silver to the Regulus by melting them, and then afterwards purifie the Regulus by Salt-petre; for so the Gold that is in the Regulus associates its self to the adjoined Silver, and inricheth it with no little increase, *viz.* according as the Minerals have had more or less Silver, in the making their separation.

And this is such a work as seems sufficiently able commodiously to sustain life; but it requires an experienced Artist, not a giddy headed fellow. Neither have I written this process for those who are not as yet well versed in Pyrotechny, but for such who are well skill'd and dexterous; and although this kind of operation needs no great store of Art, yet notwithstanding, every one will not rightly perfect it, and therefore do I warn such as are not well skill'd in Pyrotechny to desist from this labour, and betake themselves to some other, and set themselves about doing such things in which haply they are better skill'd, and not to lay the blame on me, when they are frustrated of their expectation, as if I had not dealt faithfully and sincerely in my writing, but let them rather impute it to their own preposterous rashness and unskilfulness; and what loss soever they

bring upon themselves, let them impute it only to their own (misconceptions).

To deal plainly with you, that labour is conjoyned with some difficulty; but yet if any one be diligent and well exercised in the Pyrotechnical Art, the operation will succeed in such an ones hands very pleasantly; nor will he want a worthy profit, especially if he takes such Minerals as are richest, and use them about this separation. But some perhaps will say, Whence shall I have those so good Minerals? Who demonstrates to me, which are auriferous, and which are not auriferous, which are good, and which are to be rejected, that so least being deluded in this, I should lose all my labour? I would have such a one know, that if he has not gotten so much skill and experience as to prove a Mineral, whether it be auriferous, or not, he is not at all fit to take upon him this Labour of separation, and he were far better advised, if he wholly abstained from setting about it. But yet that I may not omit ought which may seem to be desired from me, I will over and above add here in this place, what way Minerals may be proved by, whether they be auriferous or not, and 'tis on this wise to be done; all Realgars, as Arsenick, Auripigment, Cobolt, and others of that kind, are first of all to be implanted into Copper by cementation, then are they to be molten, or throughly purged and subdued with Lead (like as you do with a crude Mineral); after this, there comes out a certain little silvery Pellet, and this you are to prove as you would for Gold. Now according to the moreness or lessness of the same, so is the business to be ordered, and compute to be made, whether or no the said Mineral is worth the pains of separation as aforesaid. Likewise the Copper it self may be cupellated with Lead alone, and then

the remaining silver Pellet be proved for the Gold, with Aqua-Fortis; but as for the Antimony, and Iron, they may be well melted jointly together in a Test under a Cover or Muffel, or in a clean Crucible in a Wind Furnace, with this observation, that there be used twice as much Antimony as Iron, and so a Regulus will settle, which is to be purged or tried with Lead in a Test, and kept flowing till all the fugacious parts are evaporated, which done, there is found a silver Pellet, which is to be proved with Aqua-fortis, how much Gold it has.

NB. This probation, or trial is to be accounted of as a certain and lawful trial, but such though as you may easily err in the doing of, and so may have nothing, though it had in it a good part of Gold; for the Antimony will not easily suffer it self to be vanquished, or go off, but it will break the Test, or Cupel, and the little Pellet which is the probatory Globulus betakes it self (by reason of the fierceness, or eating penetrativeness into the Test) so that the Proba or trial it self, may most easily become fallacious, and yield no certain discovery. Which to remedy, the business is to be thus managed, after that your two parts of Antimony shall have been well melted in the Crucible, with your one part of Iron, there must be put thereinto a little dried Salt-petre powder, and the Pot, or Crucible must again be covered over, and care taken to make them melt well together; then are they to be poured out into an Iron Cone first smeared over with Wax, and when 'tis cold, the Regulus is to be knockt off from the Scoria, to which must be added twice or thrice the weight thereof of Lead, and the Regulus of the Antimony doth in the melting-pot separate it self by Salt-petre from the Lead, and the Lead is to be afterwards cupellated, and so that goes all off, and the true

weight is had. But albeit, that this description be clearly enough delivered, yet certain I am, that one in ten will not understand it aright, and therefore it is behoveful, more fully to inform, and clearly to shew the Reduction of that Regulus into scoria by Salt-petre. To make this trial or proof 'tis not needful to take a huge vast pot to fill with Iron, 'tis sufficient to take of Iron 100 *l.* of the smaller probatory weight, and 200 *l.* of Antimony, both which are to be molten together, and to be precipitated with a little Salt-petre, for so the Regulus doth the better separate it self from the scoria's, the which is then to be washt and purified by Lead and Salt-petre. This Regulus that comes from the Antimony and Iron, put with three times its weight of Lead in a clean Crucible, and make them well to flow in a wind Furnace, but cover your pot close that no Coals fall in, and so hinder the work, then take off the cover and throw in a little powdered Salt-petre, and again cover the Crucible, and above all things have a care that there fall not in any Coals, and let them lie and operate a little upon each other, then the Salt-petre imbibes all the Antimony, Iron, and Lead, and thereby becomes hard. This being done, some more Salt-petre is to be again cast in, and you must make them flow together, and so all the whole parcel of Antimony, Iron, and Lead, betake themselves into the Salt-petre, and pass into scoria, but part of the Lead remains whole or free, and is not scorified, and therein will the Gold be, which the Antimony and Iron had immixed in them, which if it be blown off on a probatory Cupel, or Test, under a Muffel, there will then remain the true weight.

NB. But it is expedient, that there be a just proportion observed in this kind of Work, that you take not overmuch Salt-petre to this ablution, or

converting it into scoria, and so bring all the Lead into scoria, but the business is so to be managed, that there be left remaining one third part at least, of those three parts of Lead you took, which is not reduced into scoria with the Antimony; then may it be poured out into a Cone, and when 'tis cool, the Regulus is to be knockt off from the scoria, and Cupellated.

NB. He that is minded to wash Metals after this manner by the help of Salt-petre, and to reduce them into scoria, must have an especial care that not a Coal falls into the Crucible, for they will much hurt, and will again precipitate them, which the Salt-petre hath already imbibed, and so render the operation invalid. Besides, it is worth the while to admonish, and tell you that all Arsenick, and Antimony is auriferous, but yet so, as that one sort is richer than another, and that abundance of Copper and Iron hath likewise in it Gold, which no body finds out, nor can it be separated by that old beaten way of Cupellating it with Lead. But some, or other might here say, Where shall I find Arsenick, Antimony, Copper, and Iron, which have Gold in them? Had they any thing of worth in them, others would doubtlesly have extracted it, and not have suffered it to come to my hands whole and sound? To satisfie such an one, I answer thus, tho' those that work on the Metals, do for the most part know, that there is in Arsenick and Antimony, a Volatile Gold, yet know they not how to extract it thencefrom with profit, for the separating way they take would cost more than the Gold they should have would yield, because (according to their usual way and custom of working) all of it would vanish away with fume. And this is to be understood of Arsenick, Auripigment, Cobolt, and Antimony, all which may (by the way we have here mentioned) be

tamed and introduced into Copper, and be made permanent and fixt.

But now, that there should sometimes be Gold implanted, naturally in Copper, and should there also be left remaining untoucht, is so done on this account, because there is not in it so much as to pay the Costs of the separating it by Lead (for verily the Cupellating it with Lead on a Test, requires great expences.) This is the reason why Gold lies immixed in the Copper oftentimes, and cannot be thence extracted with profit.

The same is to be understood of Iron, for a Vein of Iron doth oftentimes offer it self, which is very much impregnated with the more precious Metals, and yet no body either knows, or observes it. For the Ore of Iron is for the most part wont to be forced out by unskilful Men who have no care at all of the Gold, but only of such an Ore as contains a good portion of good and malleable Iron; and suppose they did certainly know, that there were in 100 *l.* of Iron, some Lots of Gold, by what means (I pray) would they extract it thencefrom? For Iron cannot be dealt withal by Cupellation on the Test, much less can it be separated (as Copper is) by the means of Lead; so that there's no reason for any one to wonder that there are so few to be found, that promise themselves, or seek after much good out of Iron, seeing it is not so apt a Subject to be separated, and subdued as Copper is. But by the help of Arsenick, Auripigment, or Antimony, 'tis no difficult matter to tame, and bring it under, so as to make it yield forth what it has: And 'tis thus. This Iron, which is auriferous, may first be cemented with Arsenick, as we have afore taught of doing so with Copper, then is it to be precipitated into Regulus's by means of

Antimony, which Reguli being imbued, or mixed with Lead, and reduced by Salt-petre into scoria, and cupellated, the Gold doth at last offer it self (which was hidden in the Minerals, or Ores, and so despised) and that with no contemptible profit. But now if any hath a mind to have the business yet more perfect, he may instead of Lead, add some Gold, and then reduce the Regulus into scoria's, by Salt-petre, and abstract it from the Gold; for so the Gold you put thereto doth the better hold that other Gold which it has attracted out of the Regulus, and there is made a much more plentiful encrease, than if the Regulus had been scorified upon Lead. Nor are the scoria to be thrown away, but they may be precipitated by throwing in live Coals, whereby the Salt-petre doth again let fall the Regulus which it hath swallowed up, and which Regulus you may separate from the dross when 'tis cold. This Regulus may be afterwards commodiously used in other Metalick Operations, that so it may yield anew out of it self the Gold; concerning which business there will a place fall in to speak of by and by. And besides, those drossy Offals (which for the gratest part are fixt Salt-petre) are also of good worth, which may be reserved for the subsequent Metallick Operation, which may be stiled a perpetual Metallick-working artifice; so that there is nothing at all wasted, but all things are of use. And this way of the separation of Metals is so very profitable, as that any one may get himself sufficient gain for to supply the necessities of Life. But if you have no fansie to meddle with Arsenick, or Auripigment and would willingly shun them by reason of their poisonous nature, they may even be omitted, and you may cement that auriferous Iron, with the Golden Marchasite, melt it with Antimony, and precipitate it into Regulus's. For even by this

means too, the Gold that was in the Marchasite, is brought in use, and yields an increase to that Gold which is extracted out of the Iron and Antimony. But if so be there be no Golden Marchasite to be gotten, that separation may be ordered, even with Iron and Antimony, and if the Iron be but auriferous, the Labour will not be without profit.

This kind of separation or eduction of Gold out of the volatile Minerals, and baser Metals will be an egregious aid or benefit to such as have learned rightly to operate in the Fire, and whom (otherwise) a grievous want of things and small estate afflicts; for there is enough of the aforesaid Minerals, every where obvious, but they cannot be well handled, or wrought upon by reason of their unfixedness and immaturity, and therefore do they lie neglected and as it were wholly useless, and are not made beneficial to any. I know that some do well understand the way of fixing Cobolt, and Bismuth by Salt-petre, and do thence get an abundance of Silver; and likewise there are some that know how to tame and subdue Arsenical Realgars by the help of Salt-petre, so that they suffer themselves to be molten, and yield forth their hidden Gold and Silver. But he that shall so manage the business as to adjoin thereto the auriferous imperfect Metals, such an one will make a more successful work thereof; especially if he gets himself some auriferous Iron, the which he may get for a small matter: And besides, if he makes his Salt-petre himself, then all that whole operation of fixing or separating the volatile Minerals would be done with very little costs, and yield much gain.

NB. But now if any one would yet get more profit by this separatory operation, then he must contrive the doing it not in Crucibles or Pots, but in hearths

(or furnaces) where a great heap of the volatile Mineral may by fixing Nitre melt together, and be precipitated into Regulus: then the Regulus may be separated from the Scoria, and be depurated by Nitre in other Furnaces, and be fitted for use; and so by this means may there be so much gain gotten, the like whereof, the great heaps of Ores which Men are necessitated to dig out of the bowels of the Earth with so much expence and charges, will scarce afford.

Likewise all Minerals may by the help of Salt-petre be fixed by the moist way, so as to yield permanent Gold and Silver; whereby (without doubt) full as much, if not more, is obtained, as is by the dry way. The way of operating is this. Dissolve a volatile Mineral, be it Cobolt, or Zink, Wismuth, Calmei, Arsenick, Auripigment, or any other the like mineral, in a strong *Aqua-fortis*; the solution being made, separate the *Aqua-fortis* again; then shall you have remaining a white Calx, which is fixed by the virtue of the *Aqua-fortis*: So that now it will admit of being molten with Lead, of being separated from the Scoria, and of being cupellated. But he that knows how to melt that Calx with Antimony and to precipitate it with auriferous Copper and Iron, gets more Gold than by that operation with Lead. But haply, every one can’t perform that separation; for the excoction or melting, the reduction into Scoria, and Cupellating upon the Test, are operations more known and easier to be done.

Moreover, there are also some Minerals, which may be fixed with the moist fire, that is, with a most strong *Aq. fortis*, so as to yield their Gold and Silver in the *Scoria*, but especially Tin, Quick-silver, and Lead: If a vehemently-strong *Aq. fortis* be but once

abstracted from Tin, it makes it so fixt, as that it will not fly away in the greatest Fire, but will melt into a white Glass. But now, if you would have it to yield forth its Gold, you must melt other Metals with it, into which the Gold may insinuate it self, and be made corporeal, such as are Silver and Lead. Lead, if it be dissolved in *Aq. fortis*, and precipitated by Urine, it gets such a hardness, that it will scarce melt in a Crucible; if you precipitate it with a Lixivium, it becomes glassy; if with Salt-water, it is rendered exceedingly volatile; for common Salt makes all Metals volatile, and on the other hand, Nitre fixeth them both by the moist and by the dry way, binds them, and constrains them to abide in the Fire; and this you are to know aforehand. Now, for the better confirmation of this thing, see how easily the common Mercury is made to abide the fire, if *Aq. fortis* shall have been several times drawn off therefrom, insomuch that it will suffer it self to be made wholly red-hot. But now, if the same be sublimed with Spirit of Salt, it becomes more and more volatile, so amongst all Salts there's not one that fixeth Minerals, save this most noble Nitre, and this hath a natural aptness to do it both by the moist and dry way, as hath been even now demonstrated.

And verily, this way of fixing the imperfect Metals (which is done by the help of Nitre, by either the moist or dry way) is to be preferred far before that which is done only with a Fire of Wood, not barely on this account, because it is sooner and speedilier performed, but for this reason too, because it fixeth better and more durably: For if any one shall endeavour to make *Arsenick*, *Cobolt*, or other volatile Minerals, permanent or fixt, by the bare force of common fire, How much time, I pray, must he allow it? Haply it will require some months for this kind of

Work, if not a whole year, yet at least half a year 'twill need; whereas by the means of Nitre it may be done in one or two daies: For if a volatile Mineral be mixed with Nitre, do fulminate, and be edulcorated, and that fulmination be repeated 3 or 4 times, it will afterwards endure a sufficiently-vehement melting Fire. Or if a Mineral be only dissolved in *Aq. fort.* and that *Aq. fort.* again drawn off therefrom, it will even by this means be rendered fixt and constant in the Fire; so great is the force and virtue that lies hid in Salt-petre: And this the ancient Philosophers well knew, and therefore said that the most vehement fire of all was to be used to the fixation of volatile Minerals; and this fire is hid only in Nitre, and is no where else to be found; for the Central Fire hath too soon withdrawn it self from the volatile Minerals and baser Metals, and left them unripe, and they can be advanced to a maturity, both by our common Wood-fire, and by the fire of Salt-petre, and be fixed. And now I suppose that I have more than sufficiently proved, by what I have said, That Salt-petre fixeth Minerals and Metals, both by the dry and moist way; nor can any one reasonably deny the same. Moreover, I judge it not fit to pass this too over in silence, *viz.* That Salt-petre doth likewise make volatile, not only the unripe Minerals, but also the fixt Metals themselves; so as that they suffer themselves to be sublimed and destilled wholly (like common Sulphur or Mercury) save the fæces, which are somewhat blackish and stay behind. Any understanding man may easily consider here what benefit is to be hoped for from such a Destillation of Metals; for seeing that all things are by destillation brought to the highest purity (as is clearly evident) it may well be concluded, that when in impure metals the pure parts are separated from the impure,

something of excellency must therefrom proceed. I will say no more of this matter at present, for I have already clearly enough demonstrated and plainly enough delivered this kind of destillation or purification of metals, in the third part of my *Spagyr. Pharmacop.* and have there shewn, that every imperfect metal, if it shall be destilled, yields volatile Gold, and that that volatile Gold may be made corporeal, without almost any Cost in a particular way, (and haply also in a universal, which I confess I have not as yet proved) thither therefore referr I the studious Reader of Hermetick and truly Philosophical *Arcana* and Secrets.

But that the difference of those waies of fixing or concentrating the volatile Minerals, and likewise the imperfect Metals, may rightly be perceived and laid open, and that it may appear how much more compendious and easie that way which is done by Nitre is than that which is done with common fire; it will be a good help to set down here some process for an example, by which it will be manifest how laborious this way of doing it barely with Wood is, and contrarily how easie that way of doing it by the moist Fire of Nitre is.

It is impossible to fix *Arsenick*, *Auripigment*, *Cobolt*, and such-like as these without the help of Saltpetre, unless they are first introduced into other metallick bodies, and are together with them, burnt with a Fire of Coals, and reduced into Ashes, and turned into Scoria, and wholly destroyed, and then at last reduced again into a metalline form, by the force of the intense fire of a Blast or Bellows: All which, that they may be dexterously performed, you must proceed on this manner, as followeth.

First of all, the *Cobalt*, *Arsenick*, or any Realgar like

these, that is auriferous, is to be introduced into Copper or Iron by cementation, in the way that we have aforementioned; then the Copper or Iron thus cemented with the Realgars, is to be reduced into fine powder, and to be commixed with Antimony, Calmei, or Calaminaris, the Marchasite, and such order is to be taken, (if for Gains sake you would do a greater heap of matter) to have them slowly and by little and little made red-hot in Furnaces or Ovens, such as in which the flame may have room to play, and as'twere brandish it self at top of the matters, and stir them, and so let them be calcined and burnt into ashes, until they emit no more fume, and this will be in some few daies; then are they to be reduced in a convenient Furnace, and restored to their metalline form; then again must they be put into the former Oven, and there be calcined and burnt into ashes, still stirring them to and fro, and the ashes are to be reduced, by the vehement Blast of Bellows, and this ashifying and reduction is to be so long repeated, till there be a Regulus found in the reduction, and all the residue turns into unprofitable Scoria. This Regulus then is to be reduced on a Test into Scoria, and the Regulus being cupellated, the Gold and Silver which the volatile Minerals contained in them, doth shew it self.

NB. Altho' this reparation is attended on with indifferent labour, yet notwithstanding (if there be a great quantity of matter dealt in) it is also gainful, especially where Minerals and Coals are to be had for a small price, and also the other imperfect metals (as Lead, Copper, and the like) that concurr in this kind of Operation; by which it also comes to pass, that there is a greater quantity of Gold and Silver extracted. For example, I burn Copper or Iron with Arsenick, Cobolt, and other poisonous volatile

Realgars, or with bare Calmei only, which also avails to constringe or bind fast; with these I mix Antimony, Bismuth, Zink, and Lead, and melt them together: Hence ariseth a brittle mass, which is to be reduced into ashes, either in Ovens, as is already afore-shewed, with the flame of Wood, which darts it self at top of that mixt matter, and by heating ripens it, or by live Coals in a peculiar Furnace, and that on this wise: Let there be built a great or small Furnace, (of good Bricks or Tiles that will endure the Fire) according to the quantity of your matter which you take to prepare, let it be at least a foot over in the inside: in the forepart let it be open a foots heighth from the Pavement or Ground, to this end, that the Grate may be put in and taken out, as need is. Then some 2 or 3 foot higher than the Grate, let a door be made, whereby you may throw in the Coals, and above or at top of the Furnace are to be made Chimneys, fitted to receive and condense the fume of the metal, that it may not fly into the air, but being there cool'd, may be taken out. All this being done, fill the Furnace with Coals, and when they are well kindled, cast in a portion of your metalline mixture, which will quickly melt, and being melted, will run through the fiery Coals, and still keep fuming, and elevate it self up into the appointed Chimneys; that which melts down through the Coals and Grates, and is in the form of metal under the Furnace, (which bottom must be made somewhat shelving), that the metal which falls down may run into a hole or pit, is to be taken up with an Iron Spoon, and again thrown in upon the Coals, and this is to be so often repeated, and so long, till all your whole mixture be burnt into ashes, or carried up in fume, and so shall be ashified and sublimed in the appointed Tunnels or Chimneys, which Flores or metalline Fumes you must take and

reduce them in a reducing Furnace, so part of them will pass into a fusile Metal, but brittle. This Metal now must be again ashify'd in that roasting or burning Furnace, and be reduced by blast of Bellows; and this ashifying and reduction is to be so often repeated, till all be seen turned into Dross or Glass; which Dross or Scorias are then to be reduced with the most vehement blast of Bellows, and so they will produce a Regulus which is to be cupellated with Lead, as is abovesaid.

NB. But if so be that of the last-made Scoria a Regulus cannot be made by the blast of the Bellows, and that the Scoria remain Scoria, 'tis a sign that you have taken too much Tin, or that your Fire hath been too intense; and therefore you must take such Scoria, and beat them to powder, and mix them with a little of either the fluid Ore of Lead, or Spume thereof, and make them flow in a reducing Furnace, then the Lead draws the Gold and Silver out of the Scoria, which may afterwards be cupellated. But as concerning the manner of making the roasting or ashifying Furnace, as likewise the fusing or reducing Furnace, I cannot indeed at present here decipher it, but I will do it in the Third Part following, where more such-like concentrations of Metals shall be mentioned and treated of. And farther, the well-minded Reader must also know, that this kind of Concentration is not at all written for those that are as yet wholly ignorant of the Art of melting metals, but for such only as have already sweated at the Fire, and have been often and much versed in such Separations or Liquefactions.

I question not, but there will be many that will despise this my way of operating, and count it an impossible thing, such are to be left to please

themselves with their own fancies. But withal, some will be found, to whom the nature of metals is known, and these will give credit to what I say, and will abundantly profit themselves, especially in those places where Minerals, Coals, and other things requisite are to be had for a small price. The greatest Expence in this way of Concentration is the Coals, which too cannot be any thing much in those places where there are such vast Woods. Every one may have his liberty to try it or let it alone.

NB. But I do openly affirm, that if so be any one shall know how rightly to handle and manage this Work, it may be compared with the perpetual or alwaies-lasting mines; and where minerals may be had, it will be most gainful; but I will not perswade any to attempt it in those Coasts where all things are dear. Nor do I think it amiss to disswade them that have no experience in these kind of Operations, lest upon the ill management of the Operation, the effect should not succeed so luckily as they hoped for, and that then they should lay the blame upon me. That which I have at present written, is agreeable to the Truth, and may be successfully and gainfully performed by an experienced Artist or Laborator: And therefore as I have afore warned, so do I again advise the unexpert to abstain from this Work, unless he means to lose his Labour and Expences.

Such things as I have here omitted for brevities sake to speak of the *Concentration of Metals*, the Third and Fourth Part shall abundantly declare; but whoever he be that shall know how to bring to pass such a Concentration, either by the means of Salt-petre, by the dry way of a flame, or the moist way, by the help of *Aq. fort.* shall have a better effect than he that useth the Fire of Wood; but on the other

hand, this Fire by Wood is of less Cost than the administration of the Work of Salt-petre is. Alas! What a deal of costs and labours have I bestowed in my life, in searching out and trying those kind of businesses, and having now brought it to this pass, as to be able to yield me the Reward of my Pains, I am not able to manage so vehement a fire, and to order the matters which require so great an heat? Therefore do I now with a willing mind make an offer of these my Experiments, to those who are of a vigorous age, and have Bodies capable of undergoing the toiling in the Fire. But that I may return to the things afore spoken of, and that that ashifying and reduction may not seem to the unexperienc'd altogether impossible and incredible, I will for their sakes bring undeniable Reasons or Arguments, whereby it shall be sufficiently enough evidenced, that such a cineration or turning into Scoria, hath its foundation in Nature, and that after this manner: Whosoever he be that hath seen or experienced somewhat in metals, knows, that the separation of the more excellent metals from the more vile, is to be done by the benefit of the Fire: for if so be that Gold, Silver, Copper, Iron, Lead, Tin, should be melted together into one mass, and you would separate them by the Fire the one from the other; this cannot be done any other way, but by adding to that mixture some other adventitious and destructive thing whereby the baser metals may be dissipated and deprived of their metallick form, of which sort is common Sulphur and such-like; for this works first on the imperfect metals, destroys them, or brings them into scoria and dross, which when they are so, and no more metals, they have no communion with metals, nor desire or love to be commixt with them afterwards: and by how much the more sulphureity

there is in Metals, so much the easier doth common *Sulphur* destroy them and turn them into Scoria: But, by how much the nobler the metals shall be, so much the less detriment doth *Sulphur* bring upon them, and the less able is it to disturb (or alter) them. But besides, *Sulphur* does not only do this, but even the Fire, and Salt-petre both in the moist and in the dry way. It is done with *Sulphur*, if the metallick mixture be granulated and burnt therewithal, or that it be despoiled of the metalline Nature, then must it be molten and by precipitation be driven or be separated into divers Regulus's. For the *Sulphur* converts the *Mass* into Scoria, which when they are molten, that which in them is the most noble doth always separate it self from the Scoria, and settle to the bottom; then next the most noble part comes other which is excellent, but yet short of the former, and so consequently it descends from one degree to another, as from Gold to Silver, from Silver to Lead, from this to Copper, from Copper to Iron, &*c.* as hath been by my formerly described separatory Art sufficiently enough shewn. But Nitre performs the separations it makes in a different manner: For after that the metallick *Mass* is molten in a Crucible, and that this (*viz.* Nitre) hath been thereinto put, it doth in the first place set upon the sulphureous part, and turns that into Scoria, then the baser Metal, and thus it does on, so long till it hath attracted all the imperfect Metals to it self, and reduced them into Scoria: and so the perfect Metals remain alone, pure; which order or governance of Operation, is also to an again, extant in my Writings.

Again, the bare fire is wont to keep another different way of destroying and scorifying Metals, than Sulphur and Nitre do.

For if a Metalline mixture be put in the fire, the more imperfect part thereof is consumed in the first place, and driven into ashes, the more excellent part gathers up it self into a globular form; and as long as it finds any consumable thing therein, so long does it work and act thereupon, nor leaves it off afore it hath reduced all into ashes. But that part which is of a constant and durable nature, remains unhurt by the fire; but yet if the combustible part be too much bigger in bulk than the abideing part, it does not only carry away with it the silver, but sometimes also a good part of the Gold, and brings it into ashes. And now, if those ashes shall be molten with a strong fire, then the ashes which arise out of the imperfect Metals, are turned into Glass, or scoria, but the ashes of the perfect Metals do reduce, and restore themselves into a malleable Body, whether it be Silver or Gold, according as it had this or that Metalline mixture in it; and if you proceed yet farther, with melting the aforesaid scoria in the fire, there will a new Regulus fall out, which contains in it that Metal, which is the noblest next Gold and Silver, *viz.* Lead, and Copper; the Tin, and Iron do for the most part abide in the scoria: Even as it is in Cupellation, or the separation of the Metals by the Cupel, the separation is there also done, by the bare fire only, and when the fire acts upon the mixture, it reduceth the Lead into scoria, or spume, or Litharge, and while this is reduced thus, it spares not the Tin, Iron, or Copper, forasmuch as they are likewise combustible, and of affinity thereto, but turns these together also into scoria, which said scoria do then creep, or sink into that penetrable, and porous Cineritious Vessel, or Test, as long as any of it remains: But the Gold and Silver which know not how to be thus burnt up into scoria or ashes, like the

other imperfect Metals are left depured and cleansed upon the Cupel: The like also, is to be judged of the aforesaid incineration of Volatile Minerals, or imperfect Metals; that is to say, when they undergo the force of the fire, they cannot but go into scoria and ashes, and if they have in them somewhat that is especially good, and durable, yet the greater part being combustible, has the prevalency; so that the more excellent part which is in it, is converted together into ashes and scoria. But yet it may be afterwards reduced, for by the vehement blast of Bellows, it separates it self from the more base part, and again assumes a body Metalline, whether it be Gold or Silver.

By this Discourse any one that is not wholly void of all Metallick knowledge may see, that the Metallick Incineration and Reduction, which we have afore delivered, is built upon a firm foundation: But he that cannot understand or apprehend these things, is uncapable of being holpen by any art. But the following third and fourth parts will yield a more clear light, or instruction. Furthermore you are to observe, that there are likewise other ways whereby Metals are reduced into scoria, and the better and more excellent part is afterwards extracted out of the scoria, *viz.* by the help of Terrestrial things which are together, sulphureous, of which sort is all Sand, Flint, and the like. If ought of this kind be permixt and molten with the metalline Calxes, it retains with it the viler part, and lets go the more excellent; as for instance, there's the Glass of Lead: For if the ashes of Lead be molten with Sand, or Flints, all the Lead together with the Flints is converted into Glass, or scoria, but the Silver or Gold which was in the Lead separates it self like a Regulus, and descends to the bottom.

Some kinds of Salts also are able to make those scoria's, *viz.* those Salts which are extracted out of burnt ashes, and are commonly called Alkalies, such as are the burnt fæces of Wine, the Tartar of Wine, Potters-ashes made of the ashes of Wood, and other such like; these also love to dissolve the sulphureous parts of metals, and do leave the Gold and Silver that is therein whole and sound, and so make a separation of the good from the evil, and give them a notable splendour: Concerning which washing, we will treat more fully in the following third part.

Besides too, even common Salt destroyeth and reduceth the imperfect metals into scoria, but not after such a manner as Alkalies do by washing, but by dissolving and extracting. For if a metallick Calx, or Ore, be powdered and mixt with common Salt, and molten together, the Salt doth more readily seize upon the metal, than on the rest of the drossiness, dissolves it, and turns it into as it were scoria. But to illustrate this thing by an Example, If I would separate a mineral which hath in it, Iron, Copper, Gold, and Silver, and should melt it thus mixt with the Salt, then the Salt would the first time lay hold on the Iron only, and leave the other metals; but if so be there were not so much Iron, as for the Salt to satisfy its devouring self, it would dissolve the Copper too, the Silver and Gold remaining untoucht; for Salt is a common Enemy to Silver, but a Friend to the Iron and Copper, which it willingly dissolves in the melting, and attracts to it self, whether it be each apart by themselves, or both jointly together, which if you are minded again to separate each from the other, you must powder that molten Mass, and pour water thereupon, and boil it; so the Iron and Copper enters into the water, together with the Salt, whereinto if you afterwards put some Iron Rods, the

Copper precipitates it self, and the Iron abides in the salt water, and is made very fit to use in dying like Vitriol; but if it will not be coagulated like Vitriol, then the Copper (which hath precipitated it self about the Iron) is to be washt and molten, out of which comes purer Copper. But yet such a Copper may be converted to better use than to be molten, of which more shall be spoken in the third part.

By this means, may one separate and bring into use those Coppery Minerals, which have much Iron in them, and by which, the Copper is otherwise rendered unmalleable and unprofitable: and this is such an Evil, as the Metal-workers have hitherto little known what remedy to apply; whereas in the mean while there lie in many places no contemptible Mines of Copper, neglected and unmedled withal, because they have Iron commixt with them. Some there have been, who have endeavoured to extract the Iron by the help of a Load-stone, but this way is too troublesom, and so is not profitable; but it may be aptly and conveniently done after this manner, did they but know how rightly to use here that aforesaid salt water, and the precipitated Copper: For the salt exalteth the Iron, and the Iron doth again exalt the salt, and animate it, so as that it may afterwards with a little labour and costs be, all of it, and without any loss, converted into good Salt-petre. But some or other may say, what profit would there redound unto me, if I should season one or two, or more Copper minerals with salt, whereby the Copper may be thence drawn out? I would have such an one to know, that in that Operation, some hundreds, or thousand pounds may be done together, and the business may be ordered upon fire in distinct Furnaces, that so a great profit may be gotten; and not only thus, but the same may likewise be done

without any Furnace or Oven, with many hundred, or thousand pounds in one Operation, at the open Air in the Field, or in a Wood, where that Ore and salt are to be found; so that the salt may serve as a covering to the mineral, and the mineral as a covering to the salt, and the Wood may serve both for the Furnace and fire.

This now in my judgment is an artificial extraction of Copper out of the Mines, (especially when 'tis such an Ore), which (otherwise) is not of any profit by reason of the immixt Iron, or else consists of such a lean Vein of Copper, as will not suffice to quit the costs of getting it out, but yet it may by this means be separated, with no contemptible profit. For there are every where almost such poor Copper Ore as this which lie and are not dreamt of: For indeed it cannot be expected, that, (if when a Copper Mine (or Ore) doth contain in it some small matter of Copper, it being so overwhelmed as 'twere with the muchness of heterogeneal medlies or mixtures, that it cannot precipitate it self into Regulus's but passeth into Scoria) it should answer the costs that are to be spent on the forcing it out; and therefore such Minerals must of necessity remain without use. And how many such kind of Ores have I found in *Germany*, which a man may have by heaps, but no body regards them, for that (as we have already said) they are too barren or poor: Whereas notwithstanding they may be most easily perfected by the help of Salt, so as to be made very gainful, & the costs exceedingly well repaid that shall be laid out upon them, especially in those places where there is such an abundance of Salt, that the Inhabitants know not what to do with the plenty they have of it. Many such places there are in *Germany*, as *Tirole*, *Saltzburg*, *Bavaria*, and the Diocess that we call *Bergtes-gaden*: in

which places all the whole mountains do not only abound with Salts, but have no small portion of Copper too: Nor is it so in those places only, but likewise every where; Salt is common and of a small price throughout all *Germany*.

And as we have already shown you, that Iron and Copper may be commodiously extracted out of the Ores by melting it with common Salt, and may be again separated from each other by precipitation: So likewise may the same be done in a moist way by boiling; and is thus, if the Ore be ground and a long while boiled with very Salt-water, the Copper will be dissolved and passeth into the Salt-water, out of which it is to be precipitated, and so fitted for use. But now, if the Salt be distilled into a Spirit, then is it apt not only to extract Copper, but also Gold out of the Ore, and will be of exceeding much profit: But this operation hath already been long ago described by me, in the First Part of the Mineral Work.

NB. But it will be yet more profitable and gainful to prepare that water out of the Salts and especially out of Nitre, which water is but of small price, and yet notwithstanding it is of that Power and Virtue, as to dissolve or extract all the Metals out of the Ores: and as well the Silver as the Gold and Copper in the solution, may be again precipitated singularly or each *Per se* one after another; and this kind of water may you likewise use about all Fossiles or Ores with a most wonderful abbreviation.

But now, if you use common *Aqua-fortis*, it extracts only the Silver and Copper, and leaves the Gold: and if you take common *Aqua-regia*, it attracts only the Gold and Copper, and leaves the Silver; so that neither of these hath (as we use to say) all the points in it, especially seeing such a kind of Water serves

but once only; nor is there as yet any one found who knows how to separate the metals in the solution one from another, so as that the water may still remain good and fit for other the like uses. But as concerning this Water of mine, thus stands the case, *viz.* One Metal may be precipitated after another out of the Water, and each distinctly, and yet for all this, the Water loseth not ought of its Virtue, but may be many times serviceable; certainly it is a most profitable invention, which (in the doing or perfecting some metals and minerals) is to be preferred many degrees before any melting by Fire. For if that there are several Metals of diverse kinds, in one Ore; as Gold, Silver, Iron, Lead (and this often happens so) and they should be forced out by Fire, they would yet remain mixt together; and there's a great deal of work to separate them. For first they are to be cupellated on Tests with a great deal of Lead, that so the imperfect Metals, as the Iron, Copper, Tin and Lead if therein, may go off; then the Gold is to be separated also apart, or by a particular operation, by the help of a separating Water, and this is not every bodies work, nor have all such as are skill'd in the Art, in all places necessary provision at hand. But on the other hand, there needs not in that other kind of way, any thing save the Water and some Glasses, with these may you manage and compleat all the whole business, and get a great deal of gain without noise and trouble. For as to such a one as betakes himself to this kind of work, his Neighbours cannot accuse him, that he will (one time or other) ruine their Fortunes and Houses by Fire, for they hear no blowing of the bellows, nor see they any Coals carried into his House. Nor will the *Smiths* say that 'tis his fault that Coals are so dear, as 'twas objected to him who called himself the little Country

fellow. Besides too, he will shun the suspicion of the Magistrates, nor will he give them occasion to suspect him to be a rich blade, and so torment him with the more grievous exactions and with quartering of Souldiers.

And now yet more, This kind of extraction does not only appertain to the getting out the Gold and Silver out of the Ores or Minerals and such as are volatile and crude, and which are every where to be met withal, and may without detriment to any, and with a safe conscience be fixed and separated by the help of this Water: But you may also by the mediation of this Water, profitably and with very small Labour separate all metallick mixtures, such as are mixt at their first forcing out of the Ores, or are melted into one Mass on any other account, and so obtain each Metal pure and free from all heterogeneities. As for example, Put case I have in my hands a certain metallick Mass, which hath in it Gold, Silver, Lead, Tin, Iron, and Copper: Now I would willingly separate the Gold & Silver therefrom: hitherto there hath been no other way known of obtaining it but by cupellating such a Mass or mixture upon the Test with Lead, and so depurating it; in which cupellation, the Copper, Tin, and Iron, do pass together with the Lead into the Test, but the Gold and Silver remain behind, which are to be afterwards separated with *Aqua-fortis*, that you may have each by it self. But the Iron, Copper, Lead and Tin do remain intermixt with each other in the Test, and should you again melt them even by the strongest blast, yet will they be commixt, and can hardly be separated the one from the other. But by this way of ours if they be dissolved in the water together, you may continually precipitate thence one Metal from another, and take them each apart, and

not only the Gold and the Silver by themselves, but the Copper, Tin, Iron, and Argent-vive (each apart).

But it is not so necessary (if in such a metalline Mass wherein are contained so many Metals, the Gold and Silver be but the smaller part) to dissolve all the other baser metals together, to get out the Gold and Silver; this will not be advisedly done, but it would be better, first to purify that Mass upon a Test with Lead, and so to separate the Gold and Silver by the help of that water, or else that Mass may be burnt with Brimstone, and the Gold be thence precipitated and depured. But if the Mass hath less of Iron, Copper, and Tin, than of Gold, there will not be such need of purifying the Mass, by first burning it upon a Test, and then separating it by *Aqua-fortis*, as is commonly known and used to be done: but the whole mixture must be dissolved, and the Gold and Silver, which you please, be separately, or apart precipitated into a clean Calx, then the Copper also apart, then the Tin; but as for the Iron, you may forbear to precipitate that, because there are no great matters to be performed with its Calx, and it will be better to draw off the *Aqua-fortis* thence, whereby it may again be had pure, and fit for use.

Then the Iron which abides behind, if it be made red hot, yields a most excellent Crocus Martis, and a most excellent Ingredient for Chirurgeons, for all their Wound-balsams and Exicatory Emplasters; it is stictick; it will also be serviceable to Painters to make exquisite colours therewithal, so that the Iron which is the basest Metal in the whole mixture, if it shall be thus wrought upon and brought into good Crocus Martis, yields the money that was laid out upon the water, and yet this very water, after its

abstracting from the Iron is not less fit for use, but is better than it was before. For in its abstraction from the Iron, it brought over with it some Goldenness, which Golden property doth afterwards, in other metallick solutions, associate it self to the Metals, is imbodyed, and yields as much Gold as the price almost (of the water) afore (thus used) could be judged at.

So likewise there's no need of reducing the Calx of Venus into Copper, but it is twice more precious than other good common Copper, because it can in a few hours space be changed into excellent Verdigrease, and so is 4 or 6 times the value of Copper it self. Further, it is not needful to melt down the precipitated Calx of Silver without any farther profit, but 'tis better to melt it by the means of the liquor of Sulphur or Antimony, for by this operation will it become auriferous, and be meliorated. Finally, you are not bound to melt even the Calx of Sol, without any profit in melting, but you may even thereoutof draw some profit; for if it be amalgamated with the Mercury of ♄ or ☽ it becomes more augmented from the ♄ and ☽; or else it may be used by the Goldsmiths to Gild withal, and by Painters, if its brightness and splendour be first restored unto it, for so it may be used about Painting or writing. So then, from this operation doth result a manifold benefit, and both the Iron and Copper, as also the Gold and Silver are rendered better, and more precious than they would have otherwise been, if they had been separated each from the other after the common manner, by the fire.

Therefore, there is not only a great benefit gotten in that way of operating, in thus extracting Gold and Silver out of their Ores, and out of the Crude Minerals, and in this so compendious a separation of

a Mass (or mixture) of Metals; but also, that separation brings more profit than the commonly used and perceived way of separating Gold and Silver by *Aqua-fortis* doth, in which way the Mass is to be first burnt to purity, and all the heterogeneities are to be taken away upon a Test; then the Silver is to be dissolved in *Aqua-fortis*, and to be separated from the Gold; this done, then the dissolved Silver is to be precipitated either by Copper, or by putting water thereunto, or else the water is to be thencefrom distilled; from whence, there is not only to be expected no greater profit than what is had (or gotten) out of the Gold separated from the Silver, but withal even half the water is lost. But now here (in my way) the greatest part of the *Aqua-fortis* is preserved, and is indeed meliorated (if there were Tin or Iron in the Mass) the very bare Crocus Martis only yields as much as the water cost, & the Flos Æris is meer gains; the Calx of Silver is by a solution of Antimony enriched with Gold, the Golden Calx is augmented by Saturn, and Luna, So that the gain is fourfold, besides that Gold which is gotten by Separation out of the Silver; and now may not I justly call this an Artificial extraction or reparation of the Metals, by the moist way; but now, like as this is a very notably profitable way of extracting the Metals out of the Ores or Minerals, & of artificially separating them by the moist way; so likewise may the same be done in the dry way by fusion; if (*viz.*) the Minera's are dissolved by Antimony or Lead, & one of the Metals after another shall be thencefrom precipitated; so that it is not so altogether necessary to cupellate such a Mass, and by the separatory water (or *Aqua-fortis* to separate that, which (by that burning on the Test) shall have been throughly purged; But if all the Metals shall be molten together

into one Mass, there may (first) be precipitated the Gold, then the Silver, then also the Copper, and by the help of Nitre be rendred pure and malleable; and this too may be done without much labour or costs; so that as well by the moist, as also by the dry way, all the Metals may be very commodiously and compendiously, and in short time separated the one from the other by the benefit of Salt-petre. Suppose I have a Mass that has Gold, Silver, or Copper and Iron in it, and I would have it suddenly depured; therefore I may only burn it with Sulphur, and by the help of Saturn precipitate one Metal from another, and purifie the Regulus, by Nitre, and such a Mass though it were 100 pound weight could I separated with the easy labour of one day, & for 3 or 4 *Dollars* costs; but as for such an one as hath no use for solution & precipitation, or hath not convenient melting Pots and Furnaces, he may granulate such a Mass, and thence precipitate the Gold, Silver, and Copper, each apart, and draw off the water from his Mars; then the Mars yields him the price of the water; the Calx of Venus yields the reward of his pains and labour, and the augmentation or melioration which happens to the Calx of Sol and Luna in the reduction is clear gain; so that the Gold and Silver are, as it were gratis, and without any expence separated from each other, and that both by the dry way and by the moist way; for the Silver is equally as well graduated and made auriferous in the dry way, by the fusion or melting in the operating, or by the transfusing (or through melting) with the Antimony; so then good Gold may by this way be precipitated out of any Silver not aureous, provided the business be but dexterously managed.

In the first part of this Book, (where I treated of the concentration of wood,) I wrote, that a Juice

might be pressed, by a peculiar Press, out of any wood, which afterwards might be turned into good Salt-petre by the benefit of the Air and time: I likewise there added some reasons, whereby it might be evinced, that it was possible for Art to perform such things, which are no other but the Rewards Nature her self yields, and that the Salt-petre which is wont to be every where digged out of the Stalls, or Stables of Cattle, is nothing else but the essential salt of Vegetables, and Animals, which is in a long tract of time, and by the hidden virtue of the Air, turned into Salt-petre.

But now if any one should haply perswade himself, that if he exposeth that Juice of the Woods to the Air for some Days, or Weeks, that it will presently become Salt-petre, certainly he would be much besides his aim, neither indeed is it lawful to prescribe Nature the time of her Operation.

Does not a Husbandman deserve to be called Ass, or Blockhead, if some few days after he hath sown his Corn, he should go into his Field to see if his Corn were ripe or not? Just thus are you to conceive of this work, for in all things must you expect the due time, in the Generation both of Animals, Minerals, and Vegetables, so that there is not the least need of any farther proof of this matter: For every Generation requireth its own proper time.

But, that very many haply have wearied themselves with imagining about that kind of Press, which I have mentioned in the first part of the *Prosperity of Germany*, and yet have not found it, is not to be much wondred at. However it is assuredly true, that such a Press may very easily be prepared, by which you may daily press a great quantity of Juice out of Wood, be it believed or not believed. But

seeing that such a Press hath been seen with me, and hath been beheld prepared, and wood squeezed out therewithal, and set to ripen in the Air, sure it cannot be long ere the truth will manifest it self and publickly vindicate it self from all its slanderers.

I say again, that such a Press is found by me, and that it is an artificial one, and is of less costs than will be easily believed. Nay more, every day brings forth new and better Compendiums, so that there will not hereafter be any use or need for the Press, to squeeze the wood out by: but every Vegetable and Animal, may without labour and trouble be in a short time, and without the press, transmuted into good Salt-petre, so that many hundred weight of Salt-petre may be generated, or produced (by the labour of only one person) out of the bare Wood, Leaves, and Grass, (where they may commodiously be had) and yet 'tis not the person aforesaid, but the air that causeth this Generation: for the person doth no more but expose to the air the subject matter, upon which it may operate, and out of which it may bring forth Salt-petre.

But there is nothing which I admire more at, then, that this present Age is so sluggish and averse from searching after the secrets of Nature. Whereas, were but the Properties only of that stupendious, or wonderful subject Salt-petre, well known, there might well be a forbearance of reading many Chimical Books seeing that by it alone may many wonderful things be performed. I have a little afore shown, how both a moist and dry extraction of Gold and Silver, & the other metals is to be done by Salt-petre; and if Nitre were of no other use but this only, yet were it well worthy to be beloved and esteemed by all, and they should as much as in them lies

labour not only to produce it in plenty out of vile things, but withal to know how to make use of the same with profit.

But whereas I have not so very openly and clearly described, or published the precipitation which is done as well by the moist, as by the dry way of the extraction and separation of metals; I would not that any one should take it in evil part; for there are exceeding weighty reasons, that make me fear to prostitute such excellent Inventions, or to chew meat (as it were) and thrust it into every Asses mouth. Let it suffice, that I have shewed, that such things are possible. But yet the Art lies not so fixed in my breast, nor is it my mind to suffer it to lie buried with me: No, God hath blessed me therewithal meerly for this end, that I might help and succour others, to the performance of which, I am most ready and willing; but yet not every one without any exception, but such as are ingenious Lovers of the Wonders of God, and know how decently to use all things, least I being too improvidently liberal, should put new Weapons into the hands of mine enemies.

I could have buried-over these things in silence, and haply been at more quiet, but it was no ways possible for me to suppress the wonderful Works of God, so as to withhold them from coming abroad to light, and to the view of Men, to the Honour of God. And whensoever it so comes to pass, that the things delivered at present in this second part, and which shall be delivered in the following third and fourth parts, shall be believed, and be brought to effect and be done: then all the crew of Slanderers and Enemies of the truth shall be confounded with shame, before the whole World, and that Genuine Alchymy, shall again be embraced, and honourably flourish: For

Salt-petre must be the Master, as *Paracelsus* saith, in a certain Chapter where he treats of common salt, and mentions Salt-petre with a commendable Testimony. Nor hath *Basil Valentine* done a less faithful Work as to his Nitre; but few there are that understand it.

I am not of the mind to boast of the knowledge of many things, but yet thus much I find, that there is not in all nature any subject given that may in good deed be compared with Nitre, as to eminency or excellency; much less deserves to be preferred before it. Let not the Lover of this Art be disquieted in his mind, so long as there are two parts to follow, and come forth: For then men will see, and be even enforced to confess these things which afore they did not believe. And upon this score do I shorten this part, that I may the sooner come to the third and fourth parts: In which parts (God willing) there shall be disclosed many most highly profitable inventions for the benefit of mankind, but yet they shall be veiled, after that same way and manner, as others afore me have used to do, that so Pearls may not be cast afore Swine.

But that I may return to my purpose, and shew that what I have said is true, and that great things may be done (as to the melioration of Metals) by the help of Salt-petre, it will be necessary, that those things which we have already written in this second part be made a little more clear, and may be visibly demonstrated to the unskilful and incredulous, in what it is, that this profit we at present speak of, is seated.

And first, as concerning the Generation of Salt-petre, there hath been enough said already, *viz.* That it may be prepared by heaps out of otherwise

unprofitable Wood, Shrubs, Briars, *&c.* which rather endamage the Ground, than do any good, because they become a refuge for cruel Beasts, which sustain themselves upon the great ruining of the other Wild ones: Nor needs this work any greater costs than to cause a House to be built in the Woods, under which the wood, together with the circulatory Vessel, may stand dry; and besides too, one man is sufficiently able to manage the whole business, nor is there any thing else required but those unprofitable underwoods, or Briars, *&c.* or if you have not such, then, the Leaves that the wind blows off from the Trees. And if also you add some Salt thereunto, even it will be likewise turned by the help of the wood into Salt-petre, and hereby will arise a greater profit: Neither is there any necessity of taking the Salt we use to season our meat withal. But yet if you can have it in plentiful quantity (as may be in many places of *Germany*, where it much abounds) it will be well, but if it be not to be so easily had, the wood it self will make Salt-petre enough; nor needs there any other thing, but to begin the work, and let Nature alone to perfect it, and to produce the Salt-petre. But farther, as *Germany* doth never want store of wood, so wants it not salt, for there are whole Mountains of salt, which to exhaust, is a thing impossible; especially in the Territories of the Arch bishop of *Saltzburg*, in the Elector of *Bavaria*'s Country, the Diocess of *Berchtsgaden* as we call it; which places, besides their abounding with Salt, do also abound with store of Wood. Have I not reason to believe that great Treasures and Riches may be hence reaped. Salt they have at their Feet, and vast Desarts at hand, which are of no use: O improvident Mankind! What account shall we give that so behave our selves in our Stewardship. Would it not be much more praise-

worthy to have drawn forth those Treasures, to the Honour of God, and not to have suffered them to have remained without being used, and unmanaged; what is the greatness of the charge requisite to the carrying on this Work that deterrs them? What expence I pray is it, seeing that a little shead may easily be built in the Woods? And besides, where great Woods, and many Trees are, there are also found Minerals both ripe and unripe, and the ripe may be forced out by Wood, or Coals, the unripe may be fixed, or ripened by the help of Salt-petre, and the Gold and Silver also may be afterwards thence separated by the Salt-petre.

And now I pray, would not the Country be enriched hereby with vast Treasures, and store of Wealth? But put the worst, if every Country did not abound with store of Wood, yet hath it a great deal of superfluous Grass and stubble, and this yields as good Salt-petre as the Wood does. And if in case every Country, or Seignory had not Minerals of their own, which might be ripened by Salt-petre, and from whence Gold and Silver might be drawn, yet nevertheless may they be had out of the bordering Provinces. Nay more, if so be the already excocted Metals should be advanced to a maturity by the means of Salt-petre, yet would not even this kind of work be without an acceptable gain, and it would be better for us so to do, than to hang them up at the Walls in our Houses, for Ornament, and Pride's sake. If an Enemy comes, one Ounce of Gold, is better than a Thousand pounds of Tin, or Copper, which the owner thereof must necessarily be constrained to leave behind him, whereas he could carry away the Gold with him; which kind of concentration we shall treat of in the following third part: and in the fourth part shall be taught, by what means even Gold and

Silver may be concentrated, that so it may lie hidden from the Enemy, and be transported (under another kind of form or shape) into such places, where it may be free from the Enemies Clutches.

And farther, that water which we speak of, serves not only to extract Gold and Silver out of the Ores, or Minera's, (which otherwise, could not be drawn forth by any excocting or forcing) but also for the taming, and bringing to use that which is in huge Stones, Flints, and the baser Fossiles (in which, Gold and Silver are only as it were, a little sticking, and will not be thence had by any art of melting) and that with profit too well worth the Labour. So that there is scarce required 6 or 7 Loths of water to extract the Gold and Silver out of 100 *l.* of Ore; and if there were but 2, 3, or 4 Lots of Silver at the most, in 100 *l.* of such matter, yet would it be a gainful extraction, especially if the things, or subject, be Arsenical, or as yet Volatile, and cannot brook the intenseness of the fire, but are driven away by a strong blast. *For in that extraction by the water, that which is volatile, is fixed, and retained together*, that it afterwards admits of being fused, or molten, and that this is so, will evidently appear to any, experimentally. Let him but take Arsenick, and dissolve it in Aqua-fortis, and again draw off the water, and he will be able presently to melt the Arsenick, and make it red hot. Quicksilver is well known to be a very Volatile matter, but yet even that, (if the water of Salt-petre be several times drawn off thencefrom) is made so fixt as to stand and abide wholly in a most intense fire. For, that which Wood and Coals do (in a long time) perform; the very same doth such a water effect in a few hours space.

But some or other may oppose or question thus;

How can it possibly be, that if those matters be so very poor, 8 or 10 pound of water should be sufficient to extract the Gold & Silver which is contained in them; for it seems as if 8 or 10 pounds of water were hardly enough to moisten 100 *l.* of Ore or Minera, but would be lost amongst such a deal of Stuff: Let such an one know, that what I have written is possible and true; I can prove it and demonstrate it even to the sight; but as concerning the administration of that Work, 'tis not fit it should be made too common.

And verily, in this sticks the main difficulty, here is the Art and Skill; 'tis not for every one to acquit himself here, and if that the gold and silver were extracted by means of this Water, yet even then the chiefest of the Art is to know how to precipitate the pure Gold and Silver thencefrom, and incorporate it, which knack I justly reserve for my Friends; for verily, this is such an Art, as by the benefit of it alone I shall renew ancient friendship with many, and moreover purchase me more new friends: And therefore let no body be angry at me, or count it amiss, that I would not publickly disclose so excellent an Invention, and put new Weapons into mine Enemies hands to hurt me withal. [*This is taught in the following parts.*] And if I should do so much as clearly to mention every thing, yet nevertheless should I incurr the enmity of many men, as much as if I never had done it; and besides too, it cannot possibly be, that all things should be so nakedly and plainly decyphered to the unskilful, as that they should presently be able to do every thing. If they once make trial, and cannot do the business that they aimed at in their minds, then they curse him that writ, and bestow many a bitter wish on him, as if he had been too obscure in expressing himself, and so

they despise that which is otherwise laudable.

But if so be that the possibility of a thing is only demonstrated, and no Receipt added, then they will not undertake any frustraneous Labours, nor will have cause of cursing any. But some or other may here enquire, Where shall I find such a sort of Minerals and Fossiles, out of which I may extract Gold and Silver? If any such had been to have been found, they would not have lain idle & waited for my coming; others would have taken them away long ago, and converted them to their own uses. I think it expedient to demand as well of such a one, who those others should be, that should have taken them away before thee? If their Experience be as little as thine, and thine no greater than is theirs, there's no danger of your fore-preventing or deceiving one another, seeing you are all alike ignorant of the thing.

Think'st thou that the number of those that are experienc'd in Metals is so large? 'Tis confest, there are enough Excocters or Metal-Separators, but yet they must *per* force leave that untouch'd which they cannot find out, seeing they know no other way of ordering their Affairs, but the old Road. It oftentimes happens, that there is more Gold driven away into the air by these Excocters, than is left behind in the fire, and yet forsooth that Crew arrogate to themselves abundance of knowledge, and perswade themselves, that they stand not in any need of any ones advice. Nor indeed do I invite them to any new Studies and Operations; let all such as list, use the same way of excocting or separation that they have learned; but if there be among them those that are not ashamed to learn better, such may be counselled. My purpose at present is, to do some acceptable

Service to those that have no Mine pits, and who cannot separate Minerals or Ore in gross, as I may say, and yet would be very glad to enjoy in private some little small gleanings as 'twere of the bits or small pieces that the Excocters leave, whereby they may get sufficient gain for the commodious sustaining of Life. These are they whom I have a mind to assist; the Richer sort have enough already to fill or satiate themselves withal; nor need they any information of mine; as for the Poor, there's no regard had to them. The whole Artifice therefore consisteth in the extracting (when there's but a very little Water used) and then in the precipitation of the Metals, so that the Water may remain good, and fit for other uses. There's plenty enough of poor Minerals and Fossiles even every where, and which no body regards and knows. It would not be amiss to look upon or consider of all Flints, Rocks, and Stones you meet with, and consider what property they are of.

Concerning this I have written in the First Part of the *Mineral Work*, *viz.* How by the Spirit of Salt Gold may be extracted out of a Flint: But as hitherto, few there are that have set about that Work, partly because they could not prepare the spirit of Salt, and partly because they knew not how to precipitate from it the extracted Gold, nor knew how to melt the extracted Calx of *Sol* with Antimony; all which I must needs confess, is not for every one to perform. But now this Extraction which is made by the Water of Salt-petre, doth extract the Silver too, which being thence precipitated, the water remains as virtuous as afore; and indeed, if a comparison be made 'twixt this and that Extraction, there is as much difference as is between black and white, and between the day and night; therefore I say that this is a thing worth

the learning, for it may be of exceeding much profit in times of affliction. Greatly is that pledge to be esteemed of, *Which* (as the old Proverb is) *redeems its Lord*. Art is no burthen to a man to carry, but it rather carries or bears up a Man, easeth him, and makes him be of a cheerful mind, because it is a thing on which we may safely trust. It is more precious than Gold and Gems, which may be lost, but this abides firm and constant even to the Grave, and doth abundantly enrich its master.

This Extraction doth likewise serve for the drawing forth Gold out of Silver, tho' it be not gilt, which to do is not in every ones power, tho' many know that Silver hath Gold in it, yet if it be not of so much value as to quit the Costs that are necessarily to be expended upon it, it is left as it is; and now there is no where separated Gold out of Silver, unless it be gilt, and they see it sticking thereupon. Any other silver whatsoever, how much gold soever it possesseth, is not separated, when as though, sometimes there might be made more gain thencefrom. But I must needs confess, that the separation of the Gold from the Silver, the usual and known way is conjoined with abundance of labour, and not worth the costs spent about making the separation, unless, haply, the silver partakes much of the Gold: Whereas on the contrary, this my way of separating is done with light labour and small costs, and therefore may be used about all silver whatsoever, though it has in it never so little Gold.

But that the business may be yet more clear, and the better perceived, it will be useful to add this information. When you would separate the Gold from the Silver by Aqua-fortis, it must first be purified with Lead, by burning it upon a Test, now in

this work there's the Test, Fire, the sufficient portion of Lead, the labour and time spent hereon to be considered, and when all this is done, then the Lead has entred, together with the Copper that was in the Silver, into the Test, and may be esteemed of but as a thing just kept from being lost. Besides too, the Copper carries away with it, a good part of the silver into the Test. And altho' that by a most vehement blast of Bellows the Test may be molten, and part of the Lead, Copper, and Silver recovered, yet the expences necessarily requisite to this operation, are more than the regain'd Metals are worth, so that these costs, charges, and troubles are too great. Then finally, when all this is done, and that the silver shall have been depured by burning, then it must after all this, be granulated, and this is some charge, and then when all this is done, it may be separated by Aqua-fortis, and being separated, be again molten into a Mass.

Now my way of working is freed from all these kind of linked labours, and so much trouble and loss of expences and time may be avoided; for when I take on me to separate any Silver, whether it has much or little Gold, I cut it into bits about the length and bredth of my Finger, so as that I but put it into my separatory Vessel; then I make it gently or by degrees red hot, to the end that the defilements may be the better washt off, and the separatory water may the better work upon it. Then pour I in the water, and suffer the Gold, Silver and Copper to be dissolved; then (after this) do I precipitate the Gold, then the Silver, then the Copper; all which operations, from the beginning to the end, are done in three or four hours space, nor requires it any expence save only the water, and a little fire, to keep the water warm, that it may the more strongly work

upon and dissolve the Silver; the Metals thus separated from each other and edulcorated, may be melted; and now from thence may any one see, how much difference there is betwixt ours and the common separation of metal, by the moist way; and if there be any one that would use this way of mine, of separation, he would doubtlessly get much gain and riches, neither could any one endammage him by way of prevention, and he would get himself an exceeding profit wheresoever he be, not only out of guilt Silver, but also out of any other; for there is not a City so small, but it hath a Silversmith, who buys up the old Silver, and separates it his own way, which is very laborious and costly, and therefore he would the willinglier give his Silver to another to separate, whereby himself might be spared the labour and cost, were there but any one that would offer him his help thereabouts.

And seeing that all Copper holds Gold hidden in it, and that that Copper is not any impediment in this my way of separation, but is resolved together with the Silver, therefore doth it always bring some increase to the Gold and consequently more gain; but the labour will be yet more gainful if it be prepared with a separatory water, which hath other Golden species or things added thereto in the making, and which render the water aureous, such as are Lapis Calaminaris, Zink, the Minerals (or Ores) of Iron and Copper; for hereby is made a water that is in it self auriferous, and which doth readily (in the separation) join its volatile Gold to the Silver, and suffer its self to be incorporated; in so much that even such Silver as hath already been separated and purged, will yield Gold enough in the separation, if it be dissolved with such a separatory water, which hath been impregnated by graduating things.

And even as this same extraction which is done in the moist way, by the water of Salt-petre is exceedingly eminent and of much use, as being sufficient to supply many thousands of men with food and necessaries for life, so as that they need not at all to be compelled to deceive or damnify one another; so likewise, no less excellent is the extraction, which is done by the dry way; if, *viz.* the Volatile Antimonial Minerals, or Ores (whether they contain in them Gold, or Silver, or Copper, Iron, or Tin, and what metals soever they contain in them) be molten with twice, thrice, or four times as much Antimony in a Crucible, and be (by the means of Iron) precipitated into Regulus's; for by this work, what good soever there was in the Ores, and even the Metals themselves, may be obtained each apart: for when the Antimony hath extracted the Gold out of the Minerals, the Gold may then be first precipitated, then the Silver, lastly the Copper; and all of them with a very small cost and little labour, insomuch, that in one days time many pounds of Gold and Silver may be drawn by this art out of the Minerals: and this too by a little fire. For the Antimony penetrates the mineral like water, and dissolves what is good in it; and as for that which is of an earthy nature it casts off from it self, and brings it into scoria. But it brings the Metal to a Metalline form in the precipitation, which must then be cupellated, or purified by the help of Salt-petre. And if haply you cannot get Antimony for this work, than common Brimstone may serve in its stead, and it will perform the same thing, if the Minera be ground and mixt therewith, and be molten in a covered Pot or Crucible, and be precipitated by Iron, for so the Metals falls down in a Regulus, and the Sulphur abides behind in the scoria. But this kind of work

requires a skilful Artist or Melter, who hath already been long and much versed in precipitations; for else he will be intangled therein, and not find the wish'd for success.

NB. This is to be understood of that kind of Minerals and Fossiles which partake of *Antimony*, *Arsenick*, *Cobolt*, *Marchasite* or *Sulphur*, being such as *Antimony* and *Sulphur* love to seize upon and dissolve in the melting: such Minerals or Ores as have sand and stones among them, they (*viz. Antimony* or *Sulphur*) will have nothing to do with them; of this kind are Granates, Talk, and such like: so neither, doth the water of Salt-petre in the moist way extend its virtue to all the Minerals, nor extracts it Gold and Silver out of all of them; but especially it acts not at all on them which are very sulphureous, unless they are first Torrified or Calcined as 'twere, and so freed from the *Sulphur*, then at length the water performs its office else not. Nor doth the water act upon Granates or other Minerals and Fossiles which are (as to the outward appearance) smooth and as it were glassy. And therefore all such must first of necessity be master'd by an incense fire, and subdued.

There are likewise to be found some Minerals and Fossiles which suffer not what they have in them to be introduced into either Lead or Antimony, or to bestow their Treasure upon them; nor will they be forced out nor cupellated, but both are and remain scoria, and do retain that form of glass which they afore had unless haply you make them stoop, and master them by a most strong blast; for by this means they suffer their Gold and Silver to be wrested from them: But they may be mastered too, if you thereto add in the fusing some Potters-ashes, or salt of the Lees of Wine, or Ashes made of Wood, and

melt them together, for so by this means also will they be obedient to thee; for salts dissolve in flux all stony Minerals, and such as resemble glass and scoria, which otherwise no other fire is able to do. But to make any more accurate description of that thing, appertains not to this place, but to the following Third Part of this Book; that which we have here minded, is only to make light touches as 'twere about shewing the variety of Fossiles and Minerals; and that, if haply any one should light on such a Mineral, out of which he cannot extract the metal, neither by the help of Antimony, nor by the water of Salt-petre, he should not think it void of every thing or that he has not dexterously and conveniently enough handled the same, but may know, that the only cause is, the property of the Mineral it self.

And now, even as the Sulphureous minerals do chiefly admit of being separated by Antimony admixed in the melting, and those that are stony, not so; even so the water of Salt-petre doth more willingly extract the stony Minerals, than the sulphureous ones; but yet, if the sulphur be taken from them by Torrefaction, it is able to dissolve even these too.

But it chiefly loves those that have Stria, and are a spotted (Quartzig) sandy, poor kind of Minera: which (otherwise) you cannot extract commodiously neither by Fusion or by Mercury: But that you may never be deceived here, it will be altogether expedient to be acquainted with both ways, both with this which is done by flux, & with that moist way which is done with Water; both ways are good, and exceedingly profitable in the separation of the Minera's or Ores; and that not only of such as may be

every where had, but likewise of metalline mixtures: whether it be by melting them together, or else by some sad mischance of your Houses being burnt; or finally, if it proceed from thence, that Gold and Silver do lie hidden unknown in copper, Tin, Iron, or Lead; now they may with ease be separated from each other by both those aforesaid ways, and on such wise as that nothing may be lost.

The ancients knew not how to extract the Gold and Silver out of Copper as the modern Refiners are wont to do, but took them together as they lay and so applied them to any uses whether to make Bells or great Guns. Neither was the separation by *Aqua-fortis* so much in use in those days as in ours: Nay more, if in a Mark of Silver there was no less than the quantity of a Ducket of Gold, yet notwithstanding they did not separate it, but did make it up into money as it was, as the old Coins do sufficiently testify. For it is evident that all Silver almost, partakes of Gold, and ancients being unexercised and not well versed in the Art of separation, all the Silver though never so auriferous was Coined into Money, or put to other uses; but their successours smelt out what they had done, and therefore bought up all such Money, and separated it, & made thereof an exceeding gain: so that there is not in our age so much as a Dollar, Schrenckbergick, Gross, Crucifer, even to the smallest half Penny, of Gold Coin to be had throughout all *Germany*, all being changed and bought up and wiped off the Gold. But yet there is Silver enough left, both made into money, and wrought up by the *Gold-smiths*, a Mark whereof contains, ⅛ or ¼ of a Ducket of Gold; and therefore seeing the common way of separation by *Aqua-fortis* cannot be of use here, because the costs are too great, and the little portion of the Gold will not

countervail the same; it may be done this way, and separated by either the moist, or by the dry way, and that with profit, though there should be less than ⅛th part of a Ducket in a Mark of Silver. And besides, Bells ever have much Silver in them, neither was it separated therefrom by the ancients (as we have said afore): and likewise old Tin hath a great deal of Gold and Silver in it, which was of old wont to be molten and wrought up with the Copper into Bells or great Guns. Many there are that well know, that there is Gold and Silver in these things, but how to extract them thence, they know not: For Copper admits not of being cupellated (or purified) by Lead, much less of being separated, & yet more difficult is it to do it by *Aqua-fortis*. But yet, it may be effected and that with a great deal of profit by the way which we have shewn, both the moist and dry too. And therefore he that shall be well skill'd in these operations, doing it either by melting with Antimony, or by the Water, will get abundance of profit out of your old and broken pieces of Bells: Nay should he buy them whole, yet would he get no small matter, for he may extract their Gold and Silver, and then melt them anew. For there is not barely in Bells that portion of Gold & Silver which the Copper and Tin had naturally in them, and of which the Bells are made; but also, it was the custom of the ancients, (when a new Bell was molten or founded,) to call some God-fathers or Witnesses (according to their ancient custom) who named the Bells afore they were baptized: And like as it is even at this day the usual custom every where throughout Christendom in the baptizing of Infants for the God-fathers to give their God-child some Money (or Plate) as a remembrance; so the ancients did do in the baptizing of their Bells, as they were flowing in the

Furnace they cast thereinto Gold and Silver, to testify their affection to Holy uses, and also that the Bells might fuse the better, and yield a clearer sound. Upon this account I say, that 'tis no small gain that may be gotten out of old Bells, seeing there never is a Bell which is destitute of Gold and Silver.

And now the well-minded Reader sees what use this extraction and precipitation of Gold & Silver which is done either in the moist or in the dry way, is of; and that not only in Minerals and Fossiles, but likewise in metalline mixtures too, out of which there can nothing be obtained by any other way.

Who I pray will not now magnifie or highly esteem of Salt-petre, and take care about having it prepared in great plenty, and so convert it to his profit, seeing it is clearly manifest that so much good may be done with it both in Metalline Affairs and Medicine? I do what I am able, I offer my self to all good Men: If they will not listen to me, I am not to be blamed but am void of fault. Man's Life is too short, than for one Man to be able to describe all the things that may be done by the help of Salt-petre; neither indeed is it to be wished that many should know it.

But seeing I but now treated of the precipitation of Metals and Minerals, I think it worth while, to shew the cause of that precipitation, that so the studious of Art may have a more certain foundation of this thing. That which is to be separated, must of necessity be a bound up or fast knit body, for else it would not need any reparation; therefore forasmuch as one Metal knits up, or incloseth another, they cannot be separated from one another, but by the breaking or destruction of the bonds which they are tied withal, and knit each within another; this destruction now, is to be done by the Fire, both in

the moist and likewise in the dry way. Copper, Tin, Iron, and Lead, may in the dry way be separated from Gold and Silver, if they are Cupellated together on a Test: For then the superfluous or burning *Sulphur*, in the imperfect Metals acts upon it self and reduceth its own proper Body or Metal into Scoria, and seeing that there is a great part of Lead therein, those Scoria are fluxile, and it doth by little & little (as much of it as goes into scoria) insinuate it self or slide into the porous Tests of Hearths. But the Gold and Silver which have no superfluous *Sulphur*, do remain unhurt upon the Test, washt and clean & do now shew themselves in their clarity & brightness; This is the separation of the good from the bad, or the combustible from the incombustible, which is done by the force of Fire only, and solely: by which, the imperfect Metals are by the help of Lead converted into brittle scoria, and so creep into the Tests, and separate themselves from the perfect Bodies; and this is a very easie work, and well enough known to every body, and is by the Refiners called Cupellation. But now in this separation, there's only a separation made of the imperfect Metals from the perfect, but the Gold and Silver remain mixt together, and if you would have each apart too, then 'tis necessary that the one be dissolved and separated from the other by a most strong *Aqua-fortis*. But if the portion of the Silver be more than the Gold, then the Silver is dissolved by a common *Aqua-fortis* made of Salt-petre and Vitriol, and so the Gold will fall to the bottom: and this way of separation is well enough known and used by all the Refiners and Goldsmiths; but if there be more Gold than there is Silver, then do they dissolve the Gold by *Aqua-regia*, and so the Silver remains undissolv'd; nor is the *Aqua-regia* any thing else but a strong water of Salt-

petre, in which some *Sal-armoniack* is dissolved; for the common or simple water of Salt-petre doth dissolve the Silver only and leaves the Gold; and contrariwise the *Aqua-regia* dissolves the Gold only, and meddles not with the Silver; but if they know not the right way of ordering the *Aqua-regia*, they are wont to add to the Gold in the melting so much Silver as may make up three times the weight that there is of the Gold, and so they separate it by *Aqua-fortis*, which (kind of operation) we call (die Quartz).

There is yet another way of separation, which is known unto them, and this is done by Cementation, if (*viz.*) divers Metals are commixt together, and they are mixt with Vitriol, Salt, and Tiles, *Stratum super stratum*, and so kept together a while for some due time in a continual fire; then the Salt and Vitriol do assume to themselves the imperfect Metals, and leave the most perfect, that is the Gold, alone. Cementing doth also attract Silver and Iron, Copper and Lead; but this kind of separation is only used to impure Gold, perfectly to purifie it.

There is yet another way of separation, which is done by Antimony, and is likewise only used to Gold, to cleanse it from its impurity and vitiosity. There is also another way of separating by fusion, in which, if you would have a metalline mixture which hath Gold, Silver, Copper, Iron, Tin, and Lead in it, to be separated into its several kinds, then the mixture must be granulated and burnt with Sulphur, and being burnt, it must be melted in a Pot, and so by precipitating it either with Lead or Iron, one Metal must be separated orderly from another; which way is wont to be used (as far as I know) but by few, because they are not so understanding in Nature, nor know any cause why one Metal separates it self from

another, sooner and more readily out of the mass or metalline mixture, and settles to the bottom.

But that the ingenious Lover of Art may have some directory, as 'twere, and some occasion to consider with himself more deeply, and may have a willingness to undertake so excellent and profitable an Art, I have a mind to discover the cause of the precipitation. It is sufficiently evident, that *like rejoiceth with like*, and that there's a disagreement 'twixt unlike things. Oil loves to be mixt with Oil, & Water is willingly united with Water, but not at all with Oil, lest by a *medium* intervening. Hence it is, that for as much as one Metal is of a different nature from another, that such as are alike, love each other, and such as be unlike do abhor and shun each other; and therefore when there are divers Metals in one mass, and that you would separate them, it is necessary that you do it by adding such a thing as is of affinity to the more imperfect part, and is at Enmity with the perfecter part. As for examp. Sulphur is a friend to all the Metals, save Gold, and that it hates; but yet it loves (even in the imperfect Metals) one better than another: for by how much the more like they are thereunto, and the more imperfect, so much the more readily is it a friend or enemy thereto. And therefore when the Sulphur shall have been put into the mass in the combustion, then the most noble parts flie off, and do their best to free themselves from the fellowship of the imperfect and unclean metals; but yet they cannot rid themselves without some assistance; and therefore if some sulphureous or imperfect Metal shall be put to the sulphureous mass, then the sulphur laies hold upon it, and lets go the more perfect part, tho' not so pure as yet, but it needs a greater purification; concerning which there may be read more at large in the

Explication of my *Miraculum Mundi*. This work is called *Precipitation*, when the more perfect part is precipitated and separated from the more vile, and that out of one and the same mixture. The same reason is there in the precipitation made in the moist way, if (*viz.*) *some* Metals, or *all* together, be dissolved in the water, one is thence precipitated after another orderly. First, That which is the most noble and most perfect, then the 2 & 3, and so regularly, until they are all precipitated. This is that most excellent and hitherto wholly unknown, and most gallant Invention wherewith I hope to become serviceable to my Friends.

He that well understands this precipitation, will gain much, but if he only meddles with this operation in a careless manner, and meerly customary as 'twere, and so not know the reason it self, why such, or such a thing is, he may worthily be compared to an Ass that carrys a sack, but knows not what is therein contained, nor whither he is to carry it. Therefore I will yet farther add a more clear information. Iron precipitates Copper out of both the dry and moist solution; Copper precipitates silver both in the moist and dry solution: *Mercury* doth chiefly precipitate Gold, and altho' Copper, Iron, Tin, and Lead, do also precipitate Gold and Silver, yet each Metal hath its own peculiar precipitation, and farther note, that Precipitations done with Salts do exceed those done with the Metals, for by them may all the Metals be precipitated; and this hath even hitherto been kept secret.

And besides, one Metal does not only precipitate another, but doth likewise change or alter it. As for examp. If I put the Plates of Copper in a solution of Silver, then (whether the solution or operation be

done either in the moist way or in the dry way) the silver precipitates it self by means of the Copper. And if I but know how to manage that business knowingly and skilfully, the Silver will also graduate some of the Copper into Silver in the precipitation, and there will be gained more silver than was put in the solution. In like manner, if I precipitate Copper with Iron, out of a solution of Copper, then doth the Copper precipitate it self by reason of the Iron, but withal, some part of the Iron doth exalt it self in the precipitation into Copper; and seeing that this kind of operation is confirmed by often Experience, there is none can safely question it. But I do not say, that in such a gradation all the Iron is turned into Copper, or all the Copper into Silver; nor did I ever try it; but yet I readily believe, that it is a thing possible to be done by reiterated workings. Mercury precipitates Gold most willingly, but only in the moist way, for in the dry way it cannot subsist; but to precipitate it in that way, Iron serves excellently well; Copper also and Lead are profitably useful hereabout also, but yet Iron is better.

There is a singular precipitation of Silver with Mercury, which I will here mention. The Chymists some hundreds of years ago, made Silver out of Cinnabar, but without any benefit or profit; neither did their silver they got come from the Mercury, but from that silver which they added to the Cinnabar. They took common Cinnabar, made of Quick-silver and Brimstone, and brake it into small bits, about the bigness of the Nail of ones Finger, and made Layes, or *Stratum super stratum*, thereof, with filings of pure Silver, then they luted up all well, and kept it in a moderate heat for 20, 30, or 40 hours, and by this way they found that their Cinnabar, which at first was red, was made black; this matter they cupellated

with Lead upon a Test, and so got as much Silver as was the weight of the Mercury in the Cinnabar.

NB. As much silver as they got, so much wanted there of the silver they put unto it, and so there was no Gain made from hence; and they supposed (but falsly) that the Quicksilver extracted the soul out of the silver put thereunto, and that therefore the said silver was rendered volatile. Nor indeed is it contrary to Reason, that *Argent-vive* should extract the soul from Silver, & thereby convert it self into silver; and that on the other hand, this exanimated silver be made wholly volatile, if it be not animated anew by other Metals; and this is what some have done and attained to, by the help of Lead.

But the Operation which I treat of at present is rather an attraction or precipitation of silver by Mercury, and this precipitation is to be done in the moist way, and is most wondrous easie; nor is it without Encrease or Gain, provided you are willing to wait its time, and 'tis thus.

If one part of purer silver be dissolved in *Aq. fortis*, and in the solution two parts of Rain-water be added to one Part of *Aq. fortis*, and there be likewise thrown in three or four parts of Quick-Mercury, and all this be left some daies or weeks in a cold place, unmoved, then the silver precipitates it self out of the Water to the Mercury, and the Mercury dissolves it self into the Water, and both together yield a wonderful representation of growing things, like Mountains and Vallies, and certainly is of a most pleasant aspect. The result of which is this, *viz.* if they stand so a long time and shall be afterwards edulcorated and reduced by Lead, then the Silver gets no small encrease from the Mercury: But yet there's no gain to be thence had unless those out

growings (or representations of fine things) be suffered to operate and germinate above a Year: And this, few operators will yield to do, and to be withheld so long a time from the fruits of their Labours. Now the reason of this operation is thus: The *Aqua-fortis* is a moist and cold Fire, and ripens as well as the dry and hot fire, but he need be a skillful Artist that sets upon this Work.

It is evident that some of the ancient Philosophers maturated their Universal Medicine by a moist fire, as you may see in *Artephius* and others. Othersome Philosophers extracted a certain secret water, or universal Menstruum and dissolvent out of the Nitrous Sea, and did thereby perform most notable things, but they always kept it secret, and the description they have made thereof, hath been obscured, or painted over with Riddles, or dark expressions, when they say, that ♄ draws his secret water out of the Sea, of as clear brightness as the Moon: which way of drawing it belongs not to this place to shew: only thus much is hinted, that out of Nitre may be drawn an Universal Menstruum, which is more excellent than the Corrosive Spirit of Nitre, which said Spirit doth indeed dissolve all things, but after the manner of corrosives, whereas this which ♄ draws and is of the clear brightness of the Moon, hath nothing of Corrosivity in it, but is mild and sweet, and wets not the hands, or tingeth them, as that Corrosive doth; and altho' such a water be Volatile, and not fixt, yet is it of such a nature as to constringe, and fix other fugitive, and unfixt things. 'Tis a thing most worthy of admiration to consider how those Natures have a mutual love each to the other, and embrace one another, and are converted the one into the other. And thus much may suffice to have been spoken concerning the precipitation of the

Metals out of both the dry, and moist solutions.

Let no body seek to fish ought more out of me by their Letters; but as for such as formerly have been my friends, and even now are, or shall hereafter be, to these I will not deny any thing, always provided, that nothing be done against a *decorum* (as they use to say) or a discreet behaviour.

But now if any one thinks that (if he comes flying from the East or West) I must presently lay aside all my business, and only attend upon doing and answering what he demands: No, that's a thing my Affairs won't permit me to do, for I have somewhat else to manage. And therefore would I forewarn such an one, that he enters not on such a Journey afore he be certain whether or no it stands with my convenience or not. For this hath many a time already happened unto me, *viz.* for some one to come with a desire of knowing this or that secret, who (when I would have told it him, but that I had no time then to accommodate him) hath gone away stomaching at me, and began to reproach me publickly afore all Men, as if I were some inhumane, or merciless fellow, and would not satisfy his request. Some also there have been, who out of the meer malice of their mind have divulged, that I my self have nothing, seeing they can get nothing from me; there are many such perverse kind of men to be found, who make no Conscience of enervating, or sucking out the very Marrow of the Bones of others, so as they may be but benefited thereby themselves; which verily is a great evil and inhumanity. How often have such kind of men come unto me, whom, (when they have spoken with their kind words unto me, and also carry the garb, and outside show of very honest Men, and promised all decent

thankfulness) I have satisfy'd, and yet have afterwards fled off from, and broken their Faith: Therefore it is the best way for him who has any singular thing, to bury it over in silence, and so he need not fear of being drained by others, that know how (by the perswasive flattering Art) to get out his skill, and give no thanks afterwards for the same.

If I had not already began to describe the *Prosperity of Germany*, certainly I would not now begin; but forasmuch as I have taken upon me to finish what I have begun, I will stand to my promise, and will in like manner shortly publish (if God shall see it good) the third and fourth part.

And seeing that in both the following parts, the melioration, or concentration of the Metals, is chiefly to be done by the help of Salt-petre, I was willing more amply to confirm in this second part, that which I wrote in the first part of the Generation of Salt-petre. And I do again and again averr with the greatest asseveration, that such a generation of Salt-petre out of wood is very true, and is founded on Nature her self.

Now must I proceed a little onwards, and withal demonstrate to the simple, that the putrefactory Stomack, in which the wood is digested and putrefied, and which transmuteth all wood, and resolves likewise all Leaves and Grass in a short time, transmutes and reduceth it into Dung, is as the stomack of Animals is, and this may be done in a most vast Quantity, as hath been proved in the first part of the *Prosperity of Germany*; and this no Mortal Man can ever refute, *viz.* that the essential salt, or salt of Nature, is no other thing but Salt-petre, but is not as yet burning, or flaming up, until it be animated by the air, and conceive a life thencefrom,

the essential salt of Vegetables, barely such, is not so, *viz.* Salt-petre, as hath been sufficiently manifested.

Now whatsoever gives fertility and power of growth, is Nitrous; if therefore there lay hid no Nitre in Minerals, as in stones, why would the Gardiners carry slackt Lime into their Fields, and use it instead of Dung to dung their Fields withal? Whence doth the Salt-petre come that grows on upon old Walls, if not from the Lime? What is the reason that the Salt-petre men do seek after old ruined walls, to make Salt-petre thereout of, were nothing in them? I verily believe that this is an indubitable Argument, that there is Salt-petre hidden in all things: For the salt of the World, or the Universal Essential salt, is nothing else but Salt-petre, when it hath after a due time attracted a life out of the air, to which end my secret circulatory instrument was invented, that such an animation might be the more conveniently brought to pass.

Nor do the other kinds of salts, *viz.* Sal-Gem, the salt made out of the natural salt fountains, or sea-salt, likewise all salts which are made out of the Lees of Wood ashes, or of Lime, also Alume and Vitriol, all these are not so widely different from salt-petre, but they may easily be transmuted, and converted into salt-petre by the animation of the air, by the help of my circulatory vessel; but for the better perception of the operation, I will subjoin this Example.

Dissolve as much Sal-Gem, sea salt, or salt made out of the salt fountains, or common salt which is frequently used in boiling of meats, or salt made of Wood ashes, or of the stones of Calx-vive, in Aq. fortis, as much as the water will assume to its self, or be able to dissolve, and let it again cool; then the salt

does not concrete or shoot granularly, any more but into longish Cones like salt-petre. Pour off the Aq. fortis, or Salt-petre water, and dissolve it, *viz.* the salt, again in a Lixivium of Lime, and cristallize it, so shall you have therefrom a Natural, or Genuine Salt-petre, and no less combustible than any other Salt-petre that is digged out of the stables where Cattle have stood. Then again may there be, by the said Salt-petre water, more salt prepared, either common salt, or salt out of Herbs, or Wood, and be dissolved and crystallized, from whence results a new salt-petre, and this operation may be so long repeated, until all the salt-petre water be turned together with the salt, into salt-petre.

This transmutation of salt-petre is perfected in some hours, and from hence may a worthy reward for your pains be reaped, could it be otherwise performed than in Glasses; and indeed, out of one pound of salt-petre, would there come an hundred pounds of petre, if a part of the transmuted salt be still distilled anew into water, and more new salt be by it again transmuted. But there is no such need of setting about a work so laborious, seeing there is at hand a far speedier, or more dexterous way of doing the same, if *viz.* those salts shall be animated by the air, by the circulation that I have contrived, and so be turned into salt-petre in great quantity: which animation, or hatching as 'twere, may be done in vast quantity by easie labour, and little costs, the air (as we use to say) turning or making both sides of the Leaf: For one portion continually kindles and animates another, no otherwise than as a little Leaven doth a great Mass of Dough, and as a little Fœces, or Yeast, yea, as little as will lie in a Spoon, serves to ferment a whole Vessel of Ale; the same is done here. And indeed, common salt-petre may be

implanted into other salts, even as a Vegetable Seed is sown in the Earth, so as thence to get in a short space of time a great encrease, even an hundred, or a thousand-fold.

But the sluggish Companions who had rather fatten themselves with eating, drinking, and sleeping, and wholly give themselves to laziness, who is able to wait so long in the expectation of this thing? Alass for ye, ye sloathful, lazy, and devouring Gluttons, with what face dare ye so manifestly to betray your laziness? I pray, if you put out your Money to Use, and have 5 or 6 *per C.* as we use to say, a Year, must you not expect the years revolution afore ye receive it? And besides, you run here a hazard too, least your Debtor breaks, and defraud you of the very Principal it self: If you lay out your Moneys on building Houses, so to make a great gain thereby, may not your Tenant be reduced to such wants as not to have wherewithal to pay you, unless haply, out of the very Stubble, or Litter of his poverty? May not your Ships which float about in the Sea, be cast away by Storms and Tempests, or be taken by Pirates? Why are ye not as Patient in your expectation as the Husbandman is, who after he hath sown his Grain, must wait a whole year afore he reaps with advantage what he hath sown. Nay, yet more, if he be pretty fortunate, he scarce gains 6 in the 100, the costs and pains being reckoned; and in the mean time he is in fear, lest the Corn should be blited by the cold, or being near ripe, should by a bad season be spoiled and corrupted in the field. If there happens a year that is droughty, then the Corn cannot grow up high, or 'tis eaten by the Mice; but now in the preparation of Salt-petre all those Cares are saved, and 100 Dollars may yearly yield thee 2, 3, 4, or more gains, and that without any wronging

thy Conscience, and without endamaging any other, and without Extortion; for if thou hast much Salt-petre, thou maist promise thy self much gold and silver also, for there will alwaies be such as buy it up; and if thou attentively heedest, thou hast so much delivered thee in my Writings, as that thou thy self maist spend it all on the melioration and Separation of Metals: Nor needest thou, if thou thinkest it good, sell any of the same. Nor is there any reason that thou should be asham'd or repent of such a Work, because one man is sufficient, without any others help, to manage the greatest operation: nor need there great expence, save only a little to build a Small Cottage, wherein the Salt-petre may be kept dry. If you have huge Woods at hand, you may make your Salt-petre out of wood; if you want wood, then out of the dung of Horses, Oxen, or other Beasts, and Sheep, or else out of even common Salt, which we use in seasoning our Meats, out of wood-ashes, and out of Lime: Whatever it be prepared from, it will not cost much, for 1 *l.* of Salt will yield thee 1 *l.* of Salt-petre.

But haply some or other may be in the mind to think or demand, why *Glauber* himself sets not about this work, and reserve the whole Gain to himself? To these I answer, that I am not of Such a greedy desire, as to wish for all to my self; nor will it at all be unacceptable to me, if another hath likewise somewhat; nor will it be at all less lawful for me to do for my self so much as seemeth me good, as for any other to take his liberty, and to do to himself as seemeth him good. Besides too, I am not of the mind to make the thing so very common, but will see whom I communicate ought unto, that so it may be applied to good uses, and not come into the hands of the Unworthy.

The first ten years however Salt-petre will not be of so vile a price, but that it may be made and sold to profit; Who knows whether or no he shall live so long? And if at the utmost it should after 20 or 30 years be of so mean a price, because of this Invention of mine, yet in the interim they may all that while enjoy the profit of the same; and it may be expected from the hands of God, that He will, for the time to come, provide for them some other waies: But never will it be so vile, as to be worth nothing; and if it were so, that you could not make any Money of it, (tho' it is impossible that it should ever be such a drug) yet (by that manuduction which I have afore given in the 1, 2, and 4*th.* Parts of my *Furnaces*; as also in *The Explication of Miraculum Mundi*; in the *2d.* & *3d.* Part of my *Pharmac. Spagyr.* and in This Second, and shall be in the following Third and Fourth Parts of the *Prosperity of Germany*;) it may be improved about many eminent uses, and so Gain be thereof made; for Salt-petre is such a Subject, as you can never have too much of, and is therefore worth our labouring after, and our endeavouring how to prepare it in good quantity, and withal, of finding out what benefit it is naturally able to afford us; for it is even a wonder to consider how great things may be done by the help thereof: It is the greatest Poison and yet may a most excellent Medicine be thereout of prepared: Colder it is than Ice, and yet hotter than any fire. It is the Generator of all things, and also their Corrupter; it vivifies and kills all things; it is heavier than gold, and yet lighter than the Wind; it is also Fire and Water, Air and Earth, Male and Female; it impregnateth and suffereth it self to be impregnated; it is light, and is also darkness; it is black and white: There are in it as many Colours as the world affords; it is fixt and volatile, corporeal

and spiritual; it kindles and burns all things, and doth also quench all burnings; it is the Beginning of all things, and yet it causeth the End of all things; that which is Soft, it makes to be congealed and become stiff; and again, that which is stiff or hard, it makes soft.

O Thou Creator of all things, How great a vastness is there of thy wonderful Works? and what a fewness is there of those who understand, or know, or labour to know it! O thou eternal Light! illuminate the dark breasts of the lost Sons of the World; O thou vivifying fire, mollifie, enkindle, heat the stubborn hearts of sluggish Mankind, that are oppressed with sleep, and frozen with cold, that so they may seek thee, and know thee, and learn to fear thee in true Humility, and to honour & worship thee without Hypocrisie. *Amen.*

An Admonition, and short Repetition of those things which are treated of in this Treatise.

That the Friendly Reader may make this Book yet of more use and benefit to himself, I thought it worth while by way of an Overplus, again to set here afore his eyes those Secrets which have been herein mentioned, what 'tis that the use of them doth consist properly in.

First of all, it hath been shown, how by the means of Salt-petre, all Volatile, and immature Minerals are to be brought to a ripeness both in the moist way and in the dry way, that so they may yield forth out of themselves in the melting, good durable Gold and Silver. Then I taught by what way the Volatile, Arsenical, Coboltick, and Antimonial, Auriferous, and Argentiferous Minerals, may by an easy labour, be by an artificial fusion, and extraction, and also by a precipitation into Regulus's,

and by the purification or cupellation of the said Regulus's, by the help of Salt-petre, converted or brought into use in the dry way, and the Gold and Silver hidden in them be drawn forth. Thirdly, I have shown the extraction of Gold and Silver out of all the barren, or poorer sort of Minerals or Ores, which are not worth the charges of excocting, or the usual way of proceeding, and of the drawing them out by a singular Art, with the water of Salt-petre, and of rightly working them; which way is to be preferred far afore any usual excoction of those poorer kinds of Minerals, not only because such an extraction is performed without a melting fire, and a Furnace; but also, because in this extraction there is more obtained than is by excoction or forcing out: And yet farther, that which was Volatile in them is fixed together, and retained, by that Water of Salt-petre which would otherwise in a melting Fire fly away in fume. And more than this too, Gold and Silver may by this moist way and that with very easie Labour be extracted and in a due manner perfected, and that commodiously and with no small profit, out of any, the vilest Fossiles (or things dig'd out of the Earth) as out of disesteemed Earths, Dusts, Sands, and Flints, from whence, otherwise you cannot extract any thing neither by Excoction nor by Mercury: So that in all places of the World what coast soever, so it be somewhat a dryish soil, is to be found such kind of Earth, Clay (or Marle) Sand, Flints, and such like which contain in them a thin or sparing kind of Gold and Silver, and from which they may profitably be extracted. Verily it is a dainty Art which may be used in all parts of the World, nor is it at all burdensom to carry, but may be excellently (well, or safely) preferred till need requires. But this is to be noted that the fatter Earth or Clay must first be made red hot and burnt afore it be moistned with the Water of Salt-petre. For without so doing, the Earth would always

remain thick (or clammy,) would drink up much water, and it would not easily be separated, but being burned, it suffers it self to be extracted no other than as if it were Sand. So neither do the Ore or Fossiles of Iron which are auriferous and abound with Iron, suffer the Gold to be extracted and precipitated out of them as readily as other Minera's or Ores do. But the iron, (if then be overmuch of it) makes the Water thick and pappy like Mud. And therefore you must put into that solution a part of common Water, to make it the thinner, that so the Gold and Silver may be the easilier precipitated thencefrom. The auriferous Coppery Ores are to be burnt first, if they are sulphureous, if not, they may then be extracted, though not burnt. The sandy, stony, brittle, and pebblish, Fossiles need no other preparation but to be burnt and ground.

Likewise all auriferous Irony, or Coppery Ores, may be separated by common salt, without a Furnace, or melting fire, and that in the open air (as we said afore where we treated of the poorer Coppery Minera's, or Ores:) and many hundreds of pounds may be done at one time, and with one labour, and the Gold which is extracted mixtly with the Iron and Copper, may be separated out of the solution, by the moist precipitating way there delivered, and that with a mighty profit and gain, because that same precipitation hurts not in the least either the Copper, or the Iron, as to their malleability.

In like manner may you precipitate the Gold out of any Vitriol water, and that in quantity (when it has any in it): and on such wise too, that the precipitation of the Vitriol shall not at all change ought of its nature; and this is so compendious a way, as that if there were contained no more than one quarter of a Drachm of Gold in 100 l. *of Vitriol, yet would not that precipitation*

be of no use or profit. And on this wise and manner may all other Mineral waters be precipitated.

Moreover, as concerning the means of easily preparing the salt so as to serve for the extracting the Copper, in all Countries, but especially on the Sea Coasts, the Concentration of salt out of the waters, or the Sea will afford you no mean, or obscure Documents touching that thing; which concentration it treated of in the Book Intituled, The Consolation of Navigators.

But forasmuch as there is mention made in this Treatise of a yet other certain Artificial separation of Gold and Silver out of the imperfect Metals, in which, Antimonial scoria have place, in a forenamed extraction, which I would willingly (but as yet have not) delivered; let no body so construe it, as if I either purposely, or carelesly omitted the same: No! The Case is far otherwise, and this is the true reason; seeing this Book now in hand is become more prolix than I intended, I determined with my self to reserve that most profitable process for the following third part, which God willing, I will very shortly publish, till then, I entreat the Friendly Reader to expect or wait for it with a good and patient mind.

Mean while he may acquiesce with these two ways, viz. *the dry and the moist, and delight himself herein, and withal take care (as far as in him lies) to have ready by him, some quantity of Salt-petre; for the following third part shall treat of nothing else but the performing and doing of processes by the help of Salt-petre. He therefore that knows how to make it in plenty at a small rate, may hope for so much the greater benefit; and this I judged expedient, to add here for admonitions sake. More shall be discovered (God willing) in the third and fourth following parts.*



A. Ein Kleiner Zinßbaur mit einem Plug. B. Ein Zinßbaur mit 3:Pflüge. C. Deß Zinßbauren Huet. D. Deß Zinßbauren 3:Pflüge. E. Die Register dar durch daß Feür regiret wirt. F. Daß eingesetzte Glaß mit seinem Helm vnd Recipienten. ***G. Die Thüer Zu dem Röster. H. Daß Aschenloch I. Ein Körblein mit Kohlen.***



☉ ☽ ***vnd*** ♂ ***mit*** ♃ ***Gagen,***
♄ ***mus die Garne tragen,***
Stelt ☿ ***recht nach dem Windt,***
So wird gefangen Fraw ♀ ***Kindt.***

THE

THIRD PART

OF THE

Prosperity of Germany.

In which is Delivered,

The way of most easily and plentifully extracting *Salt-petre* out of Various Subjects every where Obvious and at Hand.

TOGETHER

With a succinct Explication of *Paracelsus* his Prophecy; that is to say, in what manner it is to be understood the *Northern Lion* will Institute or Plant his political or civil Monarchy; and that *Paracelsus* himself will not abide in his Grave; and that a vast quantity of Riches will offer it self.

LIKEWISE

What an one that Artist *Elias* is, of whose coming in the last Days, and his disclosing abundance

of Secrets, *Paracelsus* and others have predicted.

To the READER.

Friendly Reader,

Although there are very many Causes that might disswade me from Publishing this Third and the Fourth following Part of the Prosperity of Germany *in Print, (because of the inconveniencies and hurt done me by the perfidious* Farnner*, against whom no body hath hitherto opposed himself; but all have connived and wink'd thereat; and consequently have every one left such a perfidious Treachery unpunish'd) and incourage me to leave* Germany*, a most ungrateful* Germany *as it is. Yet notwithstanding, the Love to my Neighbours (amongst whom there are many honest and good Men to be found, who lead a troublesome kind of Life to get their daily food) hath compelled me. To such therefore as these are, would I willingly give [or hand forth] a Torch [so to direct them] that they may for time to come fare better and more easily get things necessary to uphold Life withal; but yet after such wise, as that they set their Hands to the Work, for the Gods sell not ought to those that Labour not, but all good things are sought, and found out by daily Labour and diligent search.*

Now albeit, that all those things which are throughly handled in this book are true, and so confirmed by experience as that any one may easily understand and imitate them, yet notwithstanding, I am certain that there will be a very many who by reason of their ignorance, cannot understand them, and apply them to use; because the greatest part of mankind are too much addicted to laziness, and do for the most part refuse to apply their Limbs to work, but would rather walk abroad, and discourse of Arts when they are in their

cups.

I say that these secrets of mine will no ways profit such kind of Men, for such must first learn in what manner the [necessary] Instruments are to be handled, and how the Operations are to be rightly instituted and managed in seemly Order.

There are abundance of Men who (if they hap to read some Chymical Writings, or hear others talk of the profitableness of them, (they) are presently inflamed with such a love, that they will even wholly devote themselves to Chymistry on the hopes of growing rich. And now when they have proposed any thing to themselves, and attempt to do it, if they hap to have a sparkle of Fire light on their hands, or that by reason of some other obstacle, all things do not immediately fadge to their minds, they throw away the Tongs, and the Crucibles upon the Ground, and detest (or curse) the Author, because he hath not Written clear enough, and that they do not presently extract great store of Gold.

Let not such as these at all perswade themselves that they can receive any instruction from these my Writings; for my Writings require Men that are diligent, whose minds are never wearied with labour, and who are not sloathful, and impatient of Labour. Now to the studious (searchers) and especially to such Children (or Disciples) adopted or chosen by God, all these things will be unto them clear, manifestly evident, and easie to be imitated.

For as much therefore as I have spoken many things in the First and Second Part of the Prosperity of Germany*, concerning the making and use of Nitre, I do now go on in God's Name, and do teach in this third part, by what easie ways Nitre may be variously made, and be fruitfully and profitably used both by Noble Men and common Men; so that there is not a man in the whole World, but may (if he please) get great benefit*

thereby.

The Omnipotent God, the Author and giver of every good thing, bestow upon us to be able to enjoy and make use of his Gifts, that all things may tend to the Honour of his most Holy Name, and to the Safety and Preservation of us all. Amen

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Of the Preparation of SALT-PETRE.

I shewed in the First Part of the *Prosperity of Germany*, the way whereby Wood may be concentrated and turned into excellent Nitre, and which otherwise is every where for the most part consumed by lying rotting in the Woods, and yields no benefit at all unto any Man.

This Operation is to be done with the help of a certain Press artificially contrived for that particular business, the due (or right) description of which, we gave you in the *Continuation of Miraculum Mundi*. But the circulatory Vessels by which the Lixivium of the wood (or the distilled Liquor out of the wood) is to be excited and heated by the Air, have not as yet been described; and therefore we have determined to do it in this Third Part. This Figure therefore represents them, and its use; and is as follows.

There must be two Boxes (as 'twere) made of Boards, each of them of like bigness and capacity, as the Figure (or Letter) A shews. These Boxes are to be so placed, that a Vessel may be set under one end of each Box, to receive in it (if need be) the Lixivium poured into them: Let one of the Boxes or Vessels be filled top full of Horse-dung, Hens, or Pigeons-dung; or else with the Leaves of the Trees, amongst which Fir-tree Leaves are best; then pour thereupon so

much of this Lixivium which we shall make a description of by and by, so much as may suffice to moisten the Dung or Leaves contained in the Box or Vessel, and a little to over-top it. The next day (after you have so done) when you judge that all the matter is throughly wetted, let the Lixivium run out by a Tap, the which said Lixivium you must pour into the other Box filled with the like matters, and which stands just against it. Let these things stand thus wetted for some days; In the mean time, the matter contained in the first Box, grows hot, and the useless moisture being most plentifully resolved into Vapours out of the Lixivium, the said matter doth daily get more and more efficacy. As long as you observe the heat of this Box to continue, and the evaporation of moisture to last, so long must it be left in the same positure whereby the Lixivium, thus poured on, may by its notable power consume and dissolve the Dung, or the other matters contained in the Box, and turn them into Water. And here you are to observe this direction. You must always put in new matter instead of that which is turned into Liquor, and so one Box may be always at all times kept full of the matters. But now when your materials being put in the first Box, begin to cool, the Lixivium which now lies in the second Box or Vessel, must be poured upon the matters yet warm, in the first Box, that so it may again contract a heat thence-from by little and little, and so may dissolve those matters. And now whilst these things are thus detained in the first Box or Vessel, the materials that are in like manner put in the second Box do heat each other, and the unprofitable Phlegm evaporateth: Now as long as this second Box vaporateth, the Lixivium must not be drawn out of the first Box and be poured thereinto, but all the matters are to be left

to heat or burn (as it were) themselves. And when you perceive that the materials cool, then the Lixivium must be drawn off from the matters in the first Box, and be poured upon them in the second Box; and hereby the matters contained in the first Box will again wax hot, be burnt, and be turned into Liquor. By how much the oftner and longer this repeated pouring on of Lixivium is done, so much the more, and sooner are the materials consumed; from which matters thus consumed, a most excellent Salt-petre may afterwards be made, for the heat makes the matters rot. Now then to make trial (if it be well enough done) take some of this Lixivium boil it away to a sufficient height for Chrystallization, set it in a cold place to shoot, dry the salt you find, being dry, put it on a live Coal, which if you find it burn up, it is a sign that it is full time to draw off, and take all your Lixivium to the intent that Salt-petre may be thereof made by due evaporation and coagulation. But if you chance to find it otherwise, and that the salt does not flame up, the Lixivium must lie longer in the Boxes to be heated and animated by the Air which is magnetically attracted by means of the heat: This labour being rightly ordered, there may be made excellent Salt-petre out of the said matters by the help of a convenient Lixivium, in ten or twelve Months space without any costs, save some small trifle about the Lixivium; neither is the Work so grievous or troublesome, for there is nothing more required but that the Lixivium be several times poured out of one Box into the other.

NB. There are yet, besides the other aforenamed several sorts of matters that offer themselves, out of which, Salt-petre may be made by the help of the Boxes, & a due Lixivium far speedilier & plentifullier; but I judge it not needful to divulge every thing:

Likewise there may be made a convenient Lixivium to prepare Salt petre sooner, by and after another manner, to wit, in a dry form, without such putrifying as is done in the Boxes or Circulatories; but even this Artifice too, will I reserve yet a little longer for my Friends.

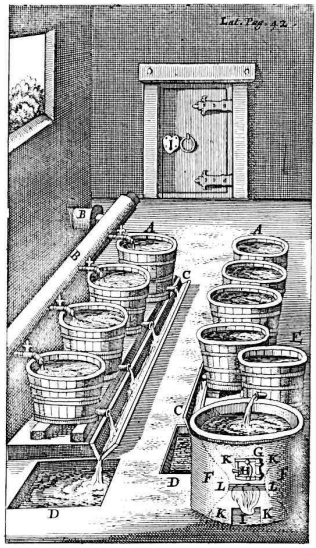
Nay yet more, there may be (by a yet secreter and shorter method) excellent Salt-petre extracted by the means of such a Lixivium in three hours space, and that with most great profit: And this way of preparing Salt-petre, I do preferr before all the others, and have found it the most excellent (Petre) of them all.

The Lixivium *is on this wise made.*

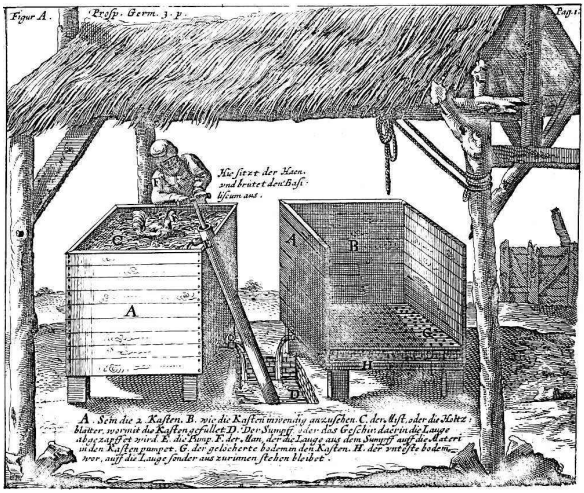
Make you a strong Lixivium of Wood-ashes, and when you burn the unprofitable Wood in the Woods into ashes, make by the same labour of your Fire some good Lime of stones fit for such a purpose; Then quench this Calx or Lime with Water, that so it may fall into powder, then pour thereon as much of the Lee of the Wood-ashes now spoken off, as is sufficient, mixt it with a wooden *Spatula*, and repeat this mixing and stirring it very often, some days following, that so the Lee may be made the stronger by reason of the Lime, and be like Fire, the which has an excellent virtue to putrefy the vegetables and animals, and to turn them into burning Salt-petre. (See the foregoing Figure belonging to this Operation noted at the top page, 1.)

Figur Nº. 2. Figur Nº. 1.





Figur A.



Hie sitzt der Haen, vund brütet den Basi: liscum aus.

A. Sen die 2 Kasten. B. wie die Kasten in wendig anzusehen. C. der Mist, oder die

Holtz: blätter, wormit die Kasten gefullet. D. Der Sumpff, oder das Geschir, daerin die Lauge abgezapff et wird. E. die Pump. F. der Man, der die Lauge aus dem Sumpff auff die Materi in den Kasten pumpet. G. der gelöcherte bodemin den Kasten. H. der vnteste bodem, wor, auff die Lauge sonder aus zurinnen stehen bleibet.

Here the Cock fits that hatches the Basilisk, by the top of the Chest.

A. *Are the two Chests.*
B. *The appearance of the Chests within.*
C. *The Horse-dung, or Leaves of Trees, wherewith the Chests are filled.*
D. *The Cistern or Vessel to receive the Lixivium.*
E. *The Pump.*
F. *The Man that pumps the Lixivium out of the Cistern, upon the matter in the Chests.*
G. *The Bottom of the Chests full of holes.*
H. *The second or lowermost Bottom where the Lixivium is kept without running out.*

Another way of making Excellent Salt-petre in great Quantity out of Lime and the Lee of Wood.

Take the aforesaid Lime and Wood-ashes, of each as much as you will; and twice as much Horse-dung or Cows-dung, mix these matters exactly in a wooden Vessel or Tub, with Mans Urine or beasts Piss, and make it of the thickness as the thicker sort of Mortar that the *Masons* use, is wont to be of. You must have good store of this Paste made. Then make a certain arch of boards, which said arch must be some three, four, six or more feet broad, and deep or high, and the length of it must be double to that (or twice as

much, as broad, and deep, or high) according to the conveniency of the place, and the quantity of Salt-petre you would make. The arch thus made, must be all over dawbed with the aforesaid mixture, the thickness of an hands breadth, just as we see Vaults, or Arches built up, of Stones and Lime upon wooden arches. Now when all is duly ordered, there must be put some Fire in under the vault of the arch, at first it must be very gentle, least the arch (of wood) as being the very foundation and supporter of the (other) arch should presently kindle and be burnt, which must not be, but be kept whole rather, untill the arch or covering thereon which is made of Lime, Ashes, and Dung, be perfectly dried. This done, there must be dawbed on, upon the said arch formerly made, more of the aforesaid prepared Calx, of about an hands-breadth thickness, and you will find that the humidity of this latter mass or second arching will be in a short time attracted by the first arch, and that this second pargetting will soon be dried: When this is done, there must be again the third time made another dawbing on, after the afore-prescribed manner. And this Operation is to be so long and so often repeated untill the arch be a foot or two in thickness, which when so, it is strong enough, nor needs it any more its wooden prop, and therefore now the Fire may be put thereto, and it may be burnt. And thus have you a vault or arch prepared, which is a most commodious instrument to make a quantity of Salt-petre by: And now if occasion require, and the condition of the place will permit, there may be built or made three or four arches after the same manner; though it be better to have them placed one by another, and to be of less magnitude or capaciousness; for so they are more convenient for Operation, as any one that practiseth hereabouts will

easily apprehend and find.

Likewise it is better to build this arched Vault which we have called an Arch, long and narrow, than short and broad, because the Fire being put under one part of such a long Chimney-like Vault, will very well diffuse its heat to every place thereof, and so keep the arch continually hot.

When this Chimney like vault is wholly dry, it must be again moistned with Mans or Beasts Piss, that it may thence contract more new humidity, which we observe will easily be, seeing we know that it is made up of Horse or Cows-dung, and not barely of Lime, for then it would not so readily and easily receive the humidity, as when Dung is mixt with it; the wetted Chimney-arch must be dried by the force of Fire put thereunder, the which may also be a little augmented proportionable to the bigness and thickness of the vault or arch.

NB. You must take good heed, that the fire you put under be not too much augmented, and so hurt your arches, but let it always be such as may suffice to dry your arch by little and little, or else the Dung will be burnt up, and the already generated Salt-petre will be spoiled, for the Fire can easily endamage the Petre.

But now when we shall have often thus moistned the said arches with Piss, and shall take notice that they (*viz.* the arches) do attract no more thereof (*viz.* of the Piss) as being already filled with the Salt of the Urine, the which may be done in some four or six Weeks time, there must be little bits broken off with an Iron Instrument in several places of the arch, and these bits must be powdered and be dissolved in Water so to make a Lixivium of it, be filtred, and after a due evaporation made, must be Chrystallized

and dried; the dried Salt matter must be put upon the Fire to see if it will flame or not: If we shall find it thus to be and to burn like Salt-petre, we must break down all the arch, and by the help of a certain Mill, reduce it into powder very fine, and pour hot Water thereupon, to extract the Lixivium with, then evaporate it as much as is convenient, and set it by in a cool place to Chrystallize; this artifice of Boiling and Chrystallising shall be declared in proper Figures or Cuts in the end of this Work. But now if so be we perceive that the Salt extracted out of those little bits of the arch do not as yet flame up, 'tis a sign that it is not as yet sufficiently animated by the air: For the air gives life, which the Fire strongly attracteth, so that by the help of the Fire the air and life are attracted, whereby the Salt is animated and made inflammable. The Fire therefore here, is to be again administred (or put under) and the arched matter to be continually moistned with Rain water; and that Rain water is best, which (if it may be had) falls down when the Wind is in the North; though when there is no Rain water to be had, other water may be substituted in its stead. This pouring on of water is to be so long continued (always, permitting the Furnace or Arch to be rightly dried afore it be sprinkled with new water) untill the Salt, sticking in the arch, be found to be sufficiently animated by the benefit of the fire and air, and be inflammable when you make trial thereof by the aforesaid method.

This is a compendious way of making good Salt-petre in quantity enough, by only Lime, Wood-ashes, and Mans or Beasts Piss. If you proceed rightly on, you may get you a great quantity of Salt-petre in a most short space of time, and that for small costs, & in a manner no labour at all. The Lime and Ashes from whence the Petre is extracted, may be mixed

again with new lime and new ashes, and other arched vaults be made thereof, upon which Urine must be continually poured in like manner as we taught afore, that so they may be animated by the help of fire and air into Salt-petre. But if you have always at hand new Calx, or Lime and ashes, it is better to make new arches, thereof in the place of those you have pulled down, and to imploy the residue of that, out of which the Salt-petre hath been already extracted about dunging some barren Soil, especially the moister sort of Ground, because it is impossible so thoroughly to separate all the Salt that nothing abides behind in the reliques.

This way I communicate to all, but I reserve for my Friends only the way by which, with the help of other Waters that cost nothing, and may be had in every place, a far greater quantity of Salt-petre may in a yet shorter time be prepared by the said arches, than is done by the help of Mans or Beasts Urine. Nay more, there are some waters which in eight days time, we have observed to have been coagulated into burning Salt-petre, which secret verily may be practically improved with most notable benefit in all parts of the World that Men live in.

Besides the subjects already mentioned, here offer themselves to our Hands many others which are obvious to all, of which such arches may be made, and which will yield more Salt-petre than the afore recited matters will; but let what has already been delivered, suffice. I cannot here forbear, but must tell you that there are some subjects to be found which (without the making the aforesaid arches, though there lie notwithstanding abundance of secrets therein) will bring a most notable benefit, and that belong not to this place, and which may be changed

in three hours space into excellent Petre; which labour (or operation) I keep for my Friends, and should it be divulged, it would bring nothing but hurt, and therefore it is better to be silent: There shall more secrets be delivered in the following discourse, where we speak of the Northern Monarche.

Here follows another way of plentifully extracting Salt-petre *out of Rocks and Stones without Vegetables or Animals.*

To the intent therefore that it may be sufficiently evidenced, and that I may prove it to be true, that Salt-petre is an universal Salt or Subject, and is consequently contained in all the things the World possesseth, I judge it a thing worth while to set down here some proofs or trials thereto accommodated.

It hath been sufficiently enough already shown in the first part of the *Prosperity of Germany*, that good Salt-petre may by Art be extracted out of all the subjects of the World: But the way of so doing was not at all disclosed. For as much therefore as all Men do so greedily desire it, I determined with my self to describe first of all, the Presses requisite to the extraction of Salt-petre out of Wood, to the end that so it may evidently appear unto all Men, that it is a thing agreeable to nature, and that it is most easily accomplishable, to press a juice out of any Wood, which may be turned by the air into good Salt-petre. But as for the circulatory Vessels, I was not willing (then) to communicate them, but rather kept them a little longer for my Friends, which said Vessels I have notwithstanding set down in this Third Part.

Likewise it seemed not expedient unto me to

reveal unto such as are enemies, the transformation (or changing) of Animals, much less of Minerals into Salt-petre. Yet however I have done so much by my Manuduction, as for any wise Men easily to understand the same by what hath been exhibited, and I have in some sort opened it, that such things are possible to be done. But I have not so clearly shown the way of effecting the same, least I should take away the occasion of other Mens exercising their ingenuity in bethinking themselves how it is to be done: Otherwise, it is not prohibited any one to seek a fuller information, from those that have knowledge in these affairs.

Therefore forasmuch as the way of extracting Salt-petre out of Stones, is look'd on as a most impossible thing by such as are not skill'd in this Art, I have determined to describe the same, for the sake and benefit of such as succeed us; The knack of this Artifice consisteth more in the knowing of the Stones, than in the extracting of the Salt-petre out of them, for the extraction is not any other way to be done, than as the making of their Lee out of the common Nitrous Earth is wont to be, concerning which thing, *Lazarus Ercker* hath written at large. The knowledge therefore of the Stones, and the preparation of them whereby they may communicate (or let go) their Nitre unto Water, is the principal thing, and without that, there cannot be any thing done in this Operation.

First of all therefore 'tis necessary that the lover of Chymistry knows, that there are various Stones to be found that yield Salt-petre, *viz.* all such Stones of which (being commonly calcined by the force of the fire) they make Lime for to build houses withal. For there lies hidden in these kind of Stones, abundance

of Salt-petre, which cannot be gotten out thence by the help of common Water by any kind of way or method: But when they are burnt with a violent Fire, they yield an hot Salt, extractable by the benefit of common water; which Salt indeed is not Salt-petre, but yet may most easily be turned by the air into Petre, like as it was formerly Salt-petre afore the Stone was burnt, and now first got another nature by the burning.

The truth of this thing, *viz.* That there resides natural Salt-petre in all Stones, which may be burnt into Lime, may be proved on this wise following:

Take of these Stones which Lime may be made of, ℥ *ss.* or ℥ *j.* powder it very fine, pour thereupon as much of the best *Aqua-fortis*: Place the Glass in which this matter is contained, in a warm place upon ashes or sand, that the stone may be dissolved in the *Aqua-fortis*: After it hath thus stood for about one quarter of an hour, take out your Glass out of the ashes or sand, though the stone be not wholly dissolved as yet, and pour thereon drop by drop, some Lixivium of wood, untill the ebullition of the Lee or Lixivium poured upon the dissolved stone ceaseth, and (the noise ceasing) you shall perceive some kind of Salt produced from them thus commixt, *viz.* from the dissolved stone and the Lixivium. Pour some common Water upon this Salt, so much as may serve to dissolve the Salt in a warm place, the solution being made let the Liquor be filtred, or be strained through some thin Linen cloth, that so the part of the stone undissolved, and the fæces may abide behind in the Filter or Linen cloth: The filtred Liquor must be coagulated into Salt by evaporating it away in a brass Vessel, then you are to weigh it: And now that we may exactly know, how much Salt-petre was in

that ℥ *ss.* of the stone, you must proceed on farther thus:

Take the same quantity of *Aqua-fortis* as you used but now, about the solution of the Lime-stone, and pour thereon likewise the same quantity of Lixivium, that you used about the precipitation of the dissolved stone, and let there be made a precipitation, let the precipitated matter be coagulated into the substance of a salt, and then also weigh how much this quantity of salt is: and now, as much less weight, as you observe to be in this salt than in the first Salt in which the Lime-stone is, so much Salt-petre was there in that half ounce of Lime-stone. This is a most certain trial, and by this means may we most easily find how many pounds of Salt-petre, are contained in an hundred weight of stones.

NB. To the end that the proof you make, may be most certain, we must use the lesser Centenary, or hundred weight, as being more usual, and more accommodate for the trying of Metals.

And albeit, that the using of Aqua-fortis to this Operation, is altogether without profit, where you would extract that salt in great plenty out of the stones, yet notwithstanding, it is not so slight or trivial a thing to know a certain way of trying what stones do most abound with Salt-petre, that so if we have a mind to extract Salt-petre out of them, we may take those, in which it lies in a plentiful manner.

Besides, those stones which do commonly yield a Calx or Lime by Calcination, and which the Bricklayers use; there are found other stones, out of which there cannot be made any Lime by Calcination, and yet nevertheless, abundance of Salt-petre may be thence extracted without any previous

Calcination. He that delights himself in this work, must exactly know aforehand such kind of stones: Forasmuch as no body would easily perswade himself that Salt-petre is contained in them. Nor do I think that ever afore this time the way of extracting Salt-petre out of these kinds of stones was used; but whether there was no body that knew that there was Such a Salt contained in them, or judged it a thing not to be regarded, this I know not. But this I know well enough that that way of extracting Salt-petre out of them was never observed and used in *Germany*, though there lies a most notable quantity of Petre in them, and easily extractable thence, did we but know the way.

Therefore, forasmuch as there is plenty enough of such stones in all places, and that Salt-petre may easilier be made of them, than of wood, I could not forbear, but must needs open and disclose this artifice for the good of the Country, and clearly explain it in this place.

Therefore, as concerning those stones which are here mentioned, there is such a plentiful store of them in most places, that they even make whole Mountains; they are in substance like a soft and tender stone, whitish in colour, [or of a shining colour] ashy colour'd or reddish, and are easily broken, and may be fashioned into all kind of shapes, or figures; and therefore they are frequently used about building Houses, for the making various Ornaments about the House, as for the corners of the Houses, the Doors, Windows, Steps or Stairs, or other External Ornaments. As long as they are yet in the Mountain, and not exposed to the air, they are of a considerable hardness enough, and do always hold it. When being used about Buildings, they are put in

such places, where they may abide at all times dry, or else always moist.

But if so be they are one while dry, and another while moist, and are always obvious to the air [or weather] they easily become soft, and there scales off from them yearly, a little portion of the back of a Knifes thickness, like Meal, so that they are yearly lessen'd, and are not at all fit to build stable, or durable Houses with. The Stone-Cutters can easily distinguish these kind of stones from others, nor do they willingly use them where there is plenty of others to be had. And now, if you should go about to make your trial with these stones, like as you did with those that they make Lime of, according to the afore delivered Probation, so to know what quantity of Salt-petre is contained in them, it will not succeed so, because the Salt-petre becomes Volatile in the Calcination of it, and doth for the most part fly away into the air: and much less can you with [bare] water extract ought out of the Crude, and not Calcined stones; for such do not yield any Salt-petre at all, unless they have been placed in a moist air for about half a years space, whereby they may of themselves fall in pieces; for being so ordered, they easily yield forth their saltness to the water that is poured on them, and consequently yield plenty of Salt-petre. Of which thing, this is a most certain Testimony, if (*viz.*) such stones are laid in some dry place, whereto the Rain cannot come, and we do most frequently sprinkle them with common water, and they do thereby turn into a powder. And if it fall out otherwise, 'tis a sign that there is very little Salt-petre to be found in them, and that the labour you shall bestow about them will be in vain. But such stones as grow soft, and fall in pieces, in six or eight Months time, do promise notable Rewards for your

Labour, *viz.* a great quantity of the wisht for salt; an hundred weight of these kind of stones thus fallen in pieces, will easily yield you ten pound of Salt-petre, more or less according to the Condition of the stone. The extracting of the Lee, or salt, is done with common water, in the same manner as the Lixivium is otherwise extracted out of that Earth which is digg'd up in the Stables where Beasts stand; which way of extracting Salt-petre, of coagulating and perfecting it, is clearly and perfectly enough described by *Lazarus Ercker*, heretofore the Emperours chief Overseer of the Metallick Affairs, in his most experienced Book of his Art of the proving of Metals; insomuch, that I esteem him to have rendred the hardest, or most difficult part, very clear, and therefore I will referr the well minded Reader thither.

But for as much as every one cannot buy himself a Book of such great bulk, only to get thereby the knowledge of the way of extracting and evaporating Salt-petre, I have judged it worth while to set down here for the sake of the Chymical Students, such directions as the aforesaid *Lazarus Ercker* hath delivered us hereabouts. For I was never of the mind to cast off such things as have been well delivered by other men; I only add unto them, those things that are mine: Let others do the like, that are the Authors of any new thing, that so there may arise some benefit thereby unto our Neighbours, for whose sake, that we may (*viz.*) serve them, the most great and blessed God hath bestowed on us such various knowledge.

But that we may get a certain knowledge of distinguishing the said stones, I think it altogether necessary to treat of them more at large.

Therefore although this kind of stones are plentifully enough, to be found every where in the World, yet they are not known, or regarded, because we cannot perswade our selves, that there is any the least portion of Salt-petre contained in them; for albeit, that an hundred pounds of such stone should contain in it ten pound of Salt-petre, and we should reduce the same into a most subtile powder, and should labour to extract from thence a Lixivium or Lee, with either cold or hot water, yet should we not hereby get so much as one Ounce of Salt-petre. The reason is this, because there is not to be found in such a stone as soon as ever it is digged out of the earth, any Corporal Salt-petre, which may be extracted by means of water, but there lies hidden only a certain Soul or Magnet of Salt-petre, by the virtue of which, that which gives a Corporeity thereunto is to be first attracted out of the air, to the end that Salt-petre may arise thencefrom. And this is hereby evident, for were it otherwise, and were there in that stone any Corporeal Petre at the first digging, it must necessarily be extracted thencefrom by the help of water; but we find it impossible to make any such extraction, unless that stone be before laid for some certain time in the air, and doth, together with its softness, acquire (or make) Salt-petre in a Magnetical manner.

But for all this, we know that this our reason so exceedingly well founded, will not yet satisfie the unskilful, unless we make it yet more clear unto them with other Expressions, and various Examples; but I pray how is it possible to declare all such Circumstances to one that is utterly ignorant. 'Tis too much labour to boil Meat for another, and to thrust it into his Mouth too. It is surely sufficient enough to have shown the truth, and discovered the way by

which the operation is to be contrived, though all things be not founded on such palpable Reasons.

But forasmuch, as the work, which I treat at present of, is an altogether new thing, and unknown to any men, the necessity of the thing requires, that we do a little more openly and clearly exhibit (and set down) the whole knack.

We presuppose, that it is a thing well known already, even to all, that each thing hath in it its peculiar magnet, by the benefit of which, it attracteth unto it self from the air, or earth, whatsoever is profitable for it; and especially, because we have largely treated thereof in our Works; insomuch, that we deem it altogether needless to repeat the same here. However 'tis requisite that I add thus much, *viz.* That the Minerals do abound with a certain Magnetick Virtue, more than other things do; and that they do attract their Life, Figure, or Shape, and Essence, out of the air, like as the Animals do, that so they may be nourished, and encrease; but being destitute, or deprived thereof, they are observed to be as it were dead, and bound, or wholly void of vigor.

As for Example. Let the Minera, or Ore of Vitriol, or Alum, be digg'd out of the Earth, that the Vitriol, or Alum in this Minera, be already duly digested and ripened, the salt may even presently be extracted thereout of, with common water. But if they have not as yet attained their full maturity, there is no salt extracted thence, unless the Minera be first torrified, or calcined. Nay more, a Minera, or Ore, that is yet less ripe, will not yield any Salt, neither by the force of the fire, nor without it; but must be yet farther exposed to the air for some time, that so it may first attract that out of the air, that is requisite to make

Vitriol or Alum of, and thus (these things being first done) the Alum, or Vitriol, is most easily gotten thereout of, by a convenient Extraction and Evaporation.

We made mention in the second part of the *Philosophical Furnaces*, of a certain Minera, or Ore of Vitriol, which is plentifully found at [*Herckeroda* in *Hassia*] sticking in that Earth, which in that place they make their Crucibles or Pots, in great quantity with; and we shewed a way of making a red and sweet Oil of Vitriol thereof, yet with this Caution, *viz.* That we shall not have from the said Minera, not the least portion at all of this Oil, if we do not expose it, broken in bits, to the cold air, for half a year, that so it may fall into powder. Such as have heeded this going to work, have made thereof amost sweet Oil; but such as have neglected the doing this, which I published out of a sincere heart, and have reduced the said Mineral into fine powder, and laboured to extract a salt thencefrom, by boiling it in simple water, bestowed their labour in vain, because of their refusing to expose that Minera for a while to the air, and they received not so much as one Grane of Vitriol; and thereupon they took occasion to slander me, and to accuse me of Lying.

But now, when they have observed that this Mineral that they cast away, being exposed to the air, had attracted therefrom a salt by its Magnetick Virtue, when it had lain so long as to mould into powder of its own accord, and that thereout of a Vitriol doth proceed, they were enforced to believe that there lay hidden some Vitriol in those stones; which notwithstanding, could not be extracted by means of water, and so they have afterward publickly confessed, that what they afore gainsay'd,

or oppos'd, was agreeable to the truth.

Thus likewise, there are various sorts of Copper (Ores) endued with an attractive power, and upon that account, there cannot be separated any Metal, by fusion, when it is first taken out of the Earth, unless we have first exposed it for some Months unto the Air.

Every Nitrous Earth, out of which Salt-petre hath already been extracted, doth (when it is again exposed to the air) attract Salt-petre anew, and this we observe to happen in all Wood-ashes, but especially in Lime-stones Calcined; for, it attracteth more salt out of the air, than its weight was afore its being Calcined. For, at the first time, you will scarce get *ij.* or *iij.* ℔. of salt out of a centenary, or hundred weight; now by how much the longer it lies exposed to the air afterwards, so much the more plenty of salt doth it yield, as is sufficiently well known already. He that is ignorant of that we speak, or else cannot understand it, let him make trial, and he shall find that what we say is a truth. Such as are Ideots do extreamly need these kind of Admonitions, that so, the business being the better understood, we may take from them all occasion of ignorantly detracting from my Writings.

I say again, that if the stones which we here treat of, are but well known, though they do not at the first yield any salt, by endeavouring to extract it with simple water, yet is there no difficulty at all therein, nor should we at all mind that, but let them only be left in the air for some due time, and by this means they will plentifully enough attract, and yield us, by a convenient extraction, good Salt-petre. The Ancients did extract Salt-petre, chiefly out of stones, which way of Extraction is now wholly lost, or out of

use. All the *Europeans* do now extract their Salt-petre out of the Earth of the Stables where Beasts stand; albeit, that the very Name it self of Salt-petre, doth declare, what matter it was first produced out of, *viz.* out of Rocks and stones: For 'tis as much as to say, salt educed out of Rocks.

Nay, even to this day there is Salt-petre extracted out of Rocks in the *East-Indies*, the which they transport thence in Ships into our Lands: Our Commonwealth of *Amsterdam* only doth yearly receive some thousands of hundreds of that Salt, which is extracted out of the bare Rocks without the addition of any other thing; I wonder what the reason is, that, that way of extracting is unknown to us *Germans*; surely I impute it meerly to the want of skill to manage this business.

Thus therefore do we think we have sufficiently declared that Nitre may in very deed be extracted out of stones; and that so clearly that I cannot see what reason any have to misbelieve my words.

But now that the certainty of the thing may be the more apparent, and that no body may think it a fable, that Salt-petre may be extracted out of stones, we will shew some places in which Salt-Petre lies in the stones in a most plenteous manner: And although that there are sundry such places that offer themselves unto us, where the stones contain Salt-petre in them, we will demonstrate the verity of this in those places we have lived in, for 'tis impossible for us expresly to pronounce such or such a Mountain in this or that Country full of Salt-Petre, which places we never saw. 'Tis not given us to search all places of the Earth, but such places as we have seen and come to, we have left but few things in them untoucht, whose nature we have not

throughly examined.

Therefore for Examples sake, we will take some part out of our own Country, and exhibit or shew unto all Men, those stones which are therein found to participate of Salt-petre, any one that is studious in these affairs may do the same in other places, and make a diligent inquiry into them, and he will find that almost all Mountains are filled therewith, and yet is known to none or at least-wise to but a very few. In *Francia*, (or *Franconia*) and indeed at *Kitzing* where I dwelt before I came to *Holland*, I often went into the Field in clear weather, with an intent to search out Minerals, and although that sundry Men ignorant of (such) businesses, do report that there are not any Minerals at all to be found in *Franconia*, and that never any Veins of Gold or any other Metal have been found there, because all the Inhabitants do live contentedly with the plentiful provenue of Wine and Corn; nor do they labour about finding out any other Treasures (for there is not any Country in all *Germany* in which is gathered more abundance of Wine, and of a better sort, than in *Franconia* aforesaid; which gathering of Wine is to be accompted to the *Franks* or *Franconians* instead of Mine-pits, and yield them imployment enough) yet nevertheless forasmuch as my mind was ever bent that way, and I was naturally inclined to search very inwardly into those things which offer themselves unto us, amongst the wonderful works of the most great and glorious God, I could not omit the visiting such places, which seemed to all Men as unfit for bringing forth Minerals, and which were judged to be clearly void of the same, as being willing to try whether or no some things that others knew not of might not offer themselves unto me. Nor was my hopes in vain, for I found far more than my

expectation was, and if necessity required I could shew those very places.

But forasmuch as I have proposed to my self, here to shew such places only in which Salt-petre may be plentifully made, I will at this time pass by the other Minerals in silence: Yet so, as not wholly to leave such things, as offer themselves in the way, untoucht. I will therefore take in hand some part of the *Rhine*, which is between *Kitzing* and *Aschaffenberg*, and will very briefly (for my purpose is not to write a Chronicle) shew what treasures the most Great and Blessed GOD hath vouchsafed unto those places, besides Wine and Corn so plentifully abounding there.

Kitzing is an Eminent I own and well built, belongs to the Bishoprick of *Wurtsburg*, and is founded upon Lime-stone, and therefore the soil is very fruitful; and yields Wine and Corn in abundance. But as soon as ever we are past over the Bridge of the *Mhene*, the Earth begins to be sandy, and has abundance of Flints in it, which contain in them some Gold as well as Iron. The manner of extracting it is described in the second Part of the *Prosperity of Germany*, and is confirmed in this third Part.

About a mile distance opposite to the said City is situated an high Mountain, very full of huge Trees, in this Mountain are various Castles (or Houses) the chief of which is the *Cossel* Castle, which is the House belonging by succession to the Lords of the County *de Cossel*: At the bottom of the Mountain there is a Village of the same name, belonging to the said Castle (or Palace.) In this Village there are abundance of Springs, the Waters of most of them I have often times tasted, and have perceived them to be mightily impregnated with Salt-petre, insomuch

that the Beasts do altogether shun the drinking of them, much less can Men use them about the boiling of their Victuals: Yet some of them yield sweet water very fit for domestick affairs. These Nitrous Fountains are of no use, nor do they effect ought, save that they drive some Mills, and run through the Village a particular way afore they fall into the *Mhene*.

And forasmuch as the aforesaid Earls have known that the chief part (or most part) of the said Fountains are wholesome by reason of the plenty of Salt-petre in them; they have therefore taken care to have a great House built, that so the place may be rendred commodious for those that by reason of some disease should come unto this place for the sake of washing their sick bodies; and there are abundance known to come, that are ill, in the Summer time, from places far remote; several of them too by a due using this Bath are restored to their former health.

They know not any other use of these nitrous Fountains than what is aforesaid; whereas if they did but know how to add some Virtues to the said waters by the benefit of the Juice of the wood, of which there is great store in that place, they would find by the use of them then, many wonderful effects in the curing of Diseases.

Being therefore earnestly intent upon the search hereof, *viz.* from whence these nitrous Waters should chiefly proceed, I found that the Mountain nigh that place, extending it self for some miles, was every where full of Salt-petre, and that it stuck in the Rocks themselves, out of which whatsoever is on the Mountain grew. I did therefore diligently search out, what condition those Stones were of, which the

workmen dig'd out in these places, and I knew that there was a great quantity of Salt petre contained in them, insomuch, that as many Mountains as here (abouts) seem to be replenished with the same: Nay more, if you shall break one or two of those Stones with which the Houses of the Village of *Cossel* are built, you shall find every where in them abundance of Salt-petre. I went to visit the place it self where those Stones are digged out, but found not any Salt-petre among the digging, because the Air had not as yet displaied its Virtues thereupon: But I observed that in those stones exposed a while to the Air, there was plenty of Salt-petre. He that would see it with his own Eyes, let him go into any House of the *Cossel* Village, whose Walls are of ancient standing, and he shall find that there is abundance of Salt-petre in those stones, and withal, that the Pillars belonging to the Bath-house do yearly wax less, for as much as scalings of the thickness of the back of a Knife do still fall off, by the power of the separated Salt-petre, as I have often very accurately and curiously observed. If the Earls or Counts did but know the true use of this excellent and o cult Treasure, they would get far greater riches out of that bare Mountain only than by all the County. I doubt not but that seeing I have in this place detected this Treasure, there will some be found that will labour for their own profits sake to find it out.

Not far off from the said Mountain the whole Earth abounds with Iron, not in the form of Veins but of Reins, insomuch that the Metal of Iron offers it self in various particles or pieces of diverse magnitudes; for in some places it is found as big as an Hazle-nut, or an Acorn; in other places as big as an Egg, or ones Fist, yea and as big sometimes as ones Head, which by the force of the Fire is made facile and yields

abundance of Iron; nor did I ever yet meet with any Metal of that sort more excellent than that is, but no body knows it, though it may be commodiously prepared or fitted for the use of Man, because there is in this place plenty enough of Wood and Water to be had [for such a purpose.]

This Mountain stretcheth out it self some miles, reaching as far as *Iphovia*, and the jurisdiction of the City of *Wurtzburg*; so that the chiefest and greatest part thereof is seated in the Bishoprick of *Wurtzburg*: And therefore might immense and vast Treasures be gotten, were there but such as were lovers of Art and would make themselves skill'd in the Operation.

Besides, this Mountain yields abundance of white and red Gypsum, which may be reduced to an exceeding whiteness by the force of the Fire.

Besides this too, we have known Marble and Alabaster digg'd out hence, and yet it has not been very durable, for it becomes nitrous after it hath lain exposed a while to the Air, and falls to powder, and yields plenty of Salt-petre, were it but rightly managed, for there's no want of Wood here.

There is yet moreover found in the said Mountain another Castle which is called *Swansburg*, and belongs to the Bishoprick of *Wurtzburg*, where the Soldiers did heretofore use the Metallick Rods, to search after, and to see if they could find (by the using them) some Treasures; and they tried whether or no (the Castle being burnt by the occasion of the War) any such Treasures lay any where hidden. What they found I do not yet know: But this I know, that the said Rods did shew good Metal to be every where (thereabouts) The which thing gave occasion of explaining or unfolding the said matter in its proper places. Besides this, they digged up nothing else but

such nitrous stones for some fathoms depth. I once viewed this place, and found that the stones extracted some years afore out of this Mountain were altogether brittle, and is a manifest token that the whole Mountain is fill'd with Salt-petre.

There is besides this Mountain, another nitrous one that I know of, of the like condition in the midway 'twixt *Kitzing* and *Wernfeld* (and is about a miles distance from *Carlstadt*) but that which is here had, differs from the former in this, *viz.* that the stones which it exhibits are of a red colour, nor are they so much impregnated with Salt-petre, as those of *Kitzing* aforesaid, for they are richer in Petre, and are of a more ashy colour.

There are likewise such kind of stones also that they cut or dig forth at the *Mhene* near the City *Rotenfeldt*, but they have not in them so much Salt-petre as those have that are found in the *Cossel* and *Swansburg* Mountain.

There's abundance of such stones in several places in *France*, but my purpose is not to mention them all, for I was minded to mention such only as my self have seen, and that are near bordering upon the *Mhene*.

They that have a mind to deal with them may make their search, and they will find in all Countrys of the Earth fit stones for their purpose, the which we may hereby know, if being kept a while in the Air, they wax soft, and scale off in most thin leaves, and there sticks to your Fingers in rubbing them off, a reddish Meal.

Besides this too, you may have a most certain sign of such Petry places by those Spiders that have a small body and round, and long feet, for they stick to

those stones in abundant measure: For such Spiders do not feed upon hearbs, grass, flies or other insects, but on old Walls, and they seat themselves chiefest of all on those aforesaid stones. They are not all venemous as the common house Spiders are, and therefore the Children do gather them, and are much delighted with them. Now they sticking on to the softer sandish stones do most certainly demonstrate that Salt-petre is contained in them; for tis that which they are nourished with, and conserve their life by, and this I was willing to signify unto you. But put case that no such nitrous stones were to be found, yet however there is not the opportunity denied us of making Salt-petre of the common Lime-making stones, and of them there is every where plenty enough, if they are calcined by the benefit of Wood, and made nitrous with the juice of wood.

What shall I say of the Calcined fæces of *Tartar* which are yearly gathered up and thrown away in vast quantities, in all that tract which lies on the River *Mhene*, between *Bamberg* and *Franckfort*, whereas notwithstanding some hundreds of hundreds weight of Salt-petre might be extracted thence-from, did they but mind it. For whatsoever Tartar is therein contained, is all of it Salt-petre when 'tis duly boiled with a Lixivium of Lime, and being hence strained, and a sufficient evaporation made, it be set by to Chrystallize. For it attracts the soul after a magnetick manner, which Operation if rightly instituted, there may be prepared thence from a most inflammable nitre in three days space, the which is likewise of far greater profit than the getting out the Tartar by the help of a Press, and with a great deal of labour; or else than the making Potashes, as we see usually done.

Besides too, there are found other stones that being burnt do yield abundance of Salt-petre, such as are the Tophi (or soft sandy stones) which may be abundantly gathered near *Triefelstein*, which is a Monastery situate on the *Mhene*, in other places of *Germany* they make even whole Mountains: So that it is evident that there is no where any want of convenient matter to gather Salt-petre from, if Men would but set their hands to the work. These stones are obvious unto all; and who knows what Treasures the Woods (which we do not at all search into) abound withal? Would time permit me I could shew that various kinds of Metals are conserved in the Mountains situate between *Kitzing* and *Franckfort*, and especially in the *Speshardensine* (Mountain,) the disclosing of which, some other more commodious place will admit of.

Now follows what we mentioned of the aforesaid LAZARUS ERCKER.

Of the manner of Boiling Salt-petre.

AND FIRST

By what means a Lixivium is to be made out of a

Nitrous Earth.

If you are minded to make a Lixivium of such an Earth, dig it as deep as you shall find by proving it to be either good or naught, especially if you intend to make it in great quantity, and keep it in a dry place. Then take care to have some great wooden Tubs, or Vessels made, so large, that each of them may hold about some ten Wheel-barrows full of the Earth, and whereby you may be able to prepare Lixivium enough, answerable to the work you have proposed to your self to do, and to the bigness of your Copper. Now there are commonly required for such a work, to one Copper Pan that weighs two hundred weight, eight Wooden Vessels which are to be placed in such order, that on each side there may stand four in a

row, opposite to each other. These same Tubs are to be so far distant from the next Collateral Vessels, as is requisite for the Wheel-Barrow wherein the Earth is brought to come between: Yea, and it is necessary that there be half an Ell's space betwixt the said Tubs and the Earth, or Ground, it self, whereon they are placed. Likewise, each of the Vessels, or Tubs, must have a hole in the fore-part, and towards the bottom thereof, fit to put in a Plug (or Tap) at: Then finally, there must be put under those Plugs, a long Vessel like a Channel-pipe, which may receive in it the Lixivium running out of the Tubs, and may guide it along into a peculiar Wooden Vessel, as into a common Store-house set in the Earth hollowed for that purpose, to receive the said Lee in.

All your Tubs being thus rightly ordered, put in upon every Tubs bottom another (false) wooden bottom, perforated with many Holes, and let it lie two Fingers breadth distant from the true bottom: Upon this (false) bottom lay yet another made of Bull-rushes, or your small sort of Reeds which grow plentifully in Ditches about the thickness of a quarter of an Ell: In want of these Reeds throw in upon the aforementioned perforated bottom, the quantity of a Span (thick) of Chopt Hay, or Straw, laying some very thin boards thereon, that so it may not be scattered (or float) abroad. And your Vessels are made compleatly ready.

Now then, put of the Earth you have already tried and gathered, as much into each of your Tubs, as they can hold, yet with this Caution, That the top part of your Vessel be empty a Spans heighth. And observe this, that if you can get some old ashes of the Curriers, or Soap-boilers, as much of it as two or three Wheel-barrows will carry, it must be put in

upon the topmost (made) bottom of the Tub, afore the Earth, but now spoken of, be put in. At the top of the earth, lay a Cover made of Twigs, (or Withes) and fasten it with a wooden stick at the top of the earth. This done, pour common water upon the earth contained in the Vessel, an Hands breadth in heighth, so as that it may rather touch (or be poured) on the Twigs, than the Earth it self, least the said earth become unequal thereby, and hollowed in several places. Let it stand thus for eight hours, which time being overpast, draw your Plug out, and let the water you poured on, run out at the hole beneath, which as long as it is muddy, you must always pour in again into the Vessel, repeating this so often, till it comes out clear, then keep it, and this water is called a weak Lee or Lixivium.

This done, pour common water again upon the earth from which the Lee hath been already, once separated, that so it may extract the residue of the Lixivium out of the earth; and this Lee is of no use, save that it may be poured on upon new earth, instead of simple water; for it oftentimes doth even yet contain a great deal of Nitre, insomuch, that you may sometimes extract out of an hundred weight thereof, three or four pound of Nitre.

This Extraction being finished, take out the unprofitable earth out of the Vessel, and put in new; and continue the Operation, after the aforesaid manner, reiterating it so long, and so often, until you have gotten store enough of the Lixivium, that the work of boiling be not intermitted for want of Lixivium.

Besides, there must be some Wooden Vessel placed at the upper part of the Copper which this Lixivium is boiled in, out of which may run so much Lixivium

into the Copper as is wasted away by boiling, that so there may be still kept the same order of boiling, and the same quantity of Lixivium in the Copper. This boiling is to be on this wise continued, until a Centenary, or hundred weight of Lixivium in the Copper, yields according to the less assay (or weight) twenty five pounds of Nitre; and this may be done in two Days, and one Night.

This being thus done, you must have ready yet two Tubs, or Vessels (more) of Wood, made after the afore prescribed manner, and furnished with a (false) perforated wooden bottom, besides its own bottom, and likewise with such a bottom as is made of Reeds (or Bull rushes); only you are to observe this here; That there must be put yet another perforated wooden bottom upon this topmost bottom of Reeds, upon which there must be first cast in some chop'd Straw, then some Ashes of Firr, Beach, or any other Tree, so much in quantity as may overtop the Straw an Ell or Cubit, [*Ulna*] high; or rather (if it may be had for a very mean price) as much as may fill the Tubs, or Vessels. But yet, these Ashes are not to be just simply thrown in (as they are) upon the Straw, but afore this is done, they must be first well mixt together, then moistened with some of the best hot Lixivium, that there may be made a Mass. Then when the Ashes are on this wise prepared, and put in the Vessel, the Lixivium boil'd to its heighth, and which yields in the proof twenty five pound, must be poured thereon, as hot as possibly it may, and is to be often drawn off by the lower hole, until (if troubled or muddy) it becomes clear.

After that all the Lee hath thus passed through the Ashes of both Tubs (the which is done upon this account, That all its fatness may pass into (or be left

with) the Ashes, which Ashes are hereby rendred stronger to wash withal) keep it in a peculiar Vessel.

Then pour the common Lee or Lixivium upon the Ashes remaining in the Tubs, which when it hath passed through the Ashes, is called the second stronger Lixivium: Then again pour on yet a third time, hot Lixivium, and when 'tis drawn off, it is called the second weaker Lixivium: Lastly, the common Lee, or Lixivium, may be poured on cold upon the Ashes, that so all the virtue of the same may be wholly extracted.

The Figure before going (*Numb. 1.*) will shew you the way of placing the Tubs, of preparing the Lixivium, and ordering the boiling.

A *Are the eight Wooden Tubs, wherein the earth is put.*

B *Channels, or Conveyances, by which the water runs into the said Tubs.*

C *Channels, or Gutters, by which the Lixivium is conveyed into a Vessel set thereunder.*

D *The Vessel in which the Lixivium is gathered, or received.*

E *The little Vessel out of which the Lixivium runs into the Copper.*

F *The Furnace.*

G *The Copper.*

H *The door of the Furnace whereby Wood is put in under the Copper.*

I *The Lower Wind-draught (or Ash-hole) of the Furnace.*

K *The inward shape of the Furnace.*

L *An Iron Grate, which the Wood is put upon.*

The manner of preparing the Liquor, out of which Salt-

petre *may be made by Boiling.*

First of all, pour your second weaker Lixivium into your Copper, and set it a boiling, then let your second stronger Lixivium run thereinto by little and little; and then lastly, the first Lixivium it self, and which is the chiefest of all, until the Copper be almost filled, and the Lixivium be boil'd enough to shoot.

And now when you perceive that your Liquor is made strong enough by boiling, put in a Brass Ladle perforated (or full of holes) several times, even to the bottom of the Copper, and if the Lixivium lets fall out of it any Salt, you will find it at the bottom, the which you may take up with your Ladle.

Note also, That the Scum which at the end of this Boiling is plentifully gathered, must be carefully taken away: Now then try the readiness of your Lixiviums Crystallization, on this wise: Put either two or three drops on a cold Iron, or on a Polish'd Plate of Iron, and if it stands, or grows hard; that is, if when you turn the Iron up and down, it does not run (or flow) down, these are signs of the fitness of your Liquors Crystallization. Or else, you may put some of the Lixivium in a Brass Vessel, and set it in cold water, and so you shall see whether the Liquor be fitted enough to Crystallize; for assoon as ever the Lixivium shall be cold, there will be plenty of Salt-petre generated: Nay, even the very Brass Spoon it self denotes the goodness of the Liquor, it being put into the Liquor, and again taken out, it will show it sticking on it, as if it were Oil.

Out of a Centenary, or hundred weight of Liquor thus perfectly prepared, there will proceed more than seventy pound of Salt-petre.

The way of rightly using the Liquor for the Generating of a more Crude Salt-petre.

Pour your Liquor prepared after the afore-shown manner, out of the Copper into a narrow Tub, or Vessel, made of Firr, or Pine-tree wood; wherein let it remain quiet, till it be a little refrigerated, and the muddiness, or slimyness [*Limus*] appear, and you find that the salt sticks on in Granes to the sides of the Vessel; now when you perceive your Lixivium so cooled, as that you can put your finger thereinto without burning, pull out the Plug, wherewith an hole made in this long Vessel, about a span's heighth from the bottom, was shut, or stopt, and so let the Liquor run forth, into very great Wooden Vessels, and deep, purposely made for such a business; or else into Copper Pans, buried almost (up to their Necks) in the earth, (for the cooler the place is, which they stand in, so much the better, and the more plenty of Salt-petre is gathered, and Crystallizeth) and you will find that your crude Salt-petre will shoot therein, the thickness of almost two fingers breadth, partly of a whitish colour, partly yellow, and partly blackish.

After that this boil'd Liquor hath stood for two days, and so many nights in the Vessel, the Lixivium of the Salt-petre which swims at top, must be taken away, which you may mix with the strong Lixivium, and pour a second time upon Ashes, for else the Lixivium will contract too much fatness, and there will be no Salt generated.

Sometimes it happens, that when the Ashes are not good, there's no salt at all gathered in the Liquor, in which case there is no presenter Remedy, than to mix such a Lixivium stronger than is fit, with another, and so pour it again upon new, and good Ashes, and then let the boiling be again perfected

after the afore-prescribed manner.

Likewise, when in the boiling you find the Lixivium very muddy, whereby the Collection of the Salt is oft-times hindred, it must be taken away, and let the Washer-Women, or Lawndresses have it, and other must be substituted in its room, and be farther purified by the help of Ashes.

The Figure signed (*Numb. 2.*) shews the manner of preparing the Liquor by boiling, and of extracting and gathering the Salt thereout of.

A *Long narrow Tubs, or Vessels, in which the decocted Liquor of the Lixivium is cooled.*

B *The Furnace wherein the Copper stands.*

C *The Man that manageth the boiling, and extracts, or draws out the salt with a Ladle, the which he lays in a Withy Basket placed on the Copper, that so the Lixivium (in it) may again run down into the Copper.*

D *The little Basket.*

E *The little Tub out of which the strong Lixivium runs (by little and little) into the Copper.*

F *Coolers, or Vessels, in which the Crude* Salt-petre *shoots.*

G *Four Brass Pans put in the Earth, hollowed for the purpose, in which likewise the* Salt-petre *is generated (or shoots.)*

H *A strong Vessel whereinto the Lixivium remaining after the generating (or shooting) of the* Salt-petre*, is put.*

The way to purifie the Crude Salt-petre.

When all these things are thus done, and the Lixivium that swims at the top of the Salt-petre is taken away, lift up those Vessels, or Brass Pans, containing that

salt, and turn them up and down in some convenient place, that so the residue of the Lixivium, that lies as yet in them may flow, or run clearly out, into another Vessel set thereunder.

This done, take the Salt-petre out of the Coolers, or out of the Coppers (or Brass Pans) with an Iron Spatula, or rather with such an Instrument as your Plasterers use (eine telle, a Truel) and put it in a Tub that has a hole in the bottom thereof, that so the Lixivium may be perfectly separated therefrom. They that sell that crude Salt-petre, and not at all purified, for the Salt-petre Boilers, do pour thereon pure (or clear) Well-water, by the means of which, it is made more white, that which is thencefrom separated they do again mix with other stronger Lixivium and so boil it up for the following use.

But if you have a mind to purifie this crude Nitre from its salt, and all its Impurities, that it may be rendred fair, and white, you are to proceed this following way:

Take almost as much Well-water as is sufficient for the dissolution of the Salt-petre, put it in the purifying Copper Vessel, first cleaned with water, and dried with a cloth, and put the fire under it, and make it most exceeding hot, then throw in your Salt-petre by little and little, and in pieces, continually stirring the Salt-petre that sticks at the bottom with a spoon, that it may be the easier, and sooner dissolved; this only is to be observed, that there is required a more gentle fire, while the Salt-petre is cast into the Copper, so as the water may be kept always hot. When all the Salt-petre is almost dissolved in the water, promote the boiling thereof, by augmenting the fire, then try if there be any salt in a (biggish) gross form, residing in the bottom of

the Copper Vessel, which if you find to be, (for indeed, the Salt-petre it self is not so very easily dissolved, nor doth its being admixt in a more copious manner, at all benefit the Lixivium) take it forth with a Spoon, (or Ladle.)

This done, separate the Scum swimming at top of the boiling water, then have ready a Brass Vessel that will hold about ℥*j.ss.* of Liquor, fill it half full with the Lixivium, set the Vessel in cold water to cool, and you shall find your Nitre presently to Crystallize, or shoot therein.

Hereby may you try whether your Purgative water be strong enough, or not; for if it be stronger than is fit, you will find a little skin spread it self over the matter contained in the Vessel, and when it comes to be so, add thereunto more hot water, keeping the fire in that degree of heat, as may suffice to keep the water contained in the Copper, gently boiling.

Now when you have kept it thus boiling for some season, try the goodness of your water again, after the aforesaid manner; and if you shall find a Crystallization therein, and no Concretion, or heaping-together, leaving a gaping, or chap in the midst, the business is well done; but if it be otherwise (than thus well done) so that it be wholly shut in (or gathers a skin all over) at top, pour on hot water, until your Matters come to succeed after the manner aforesaid.

Then after all this, take of the best Wine Vinegar, about one pound thereof, and pour it into the said water, and you will presently see a blackish spume, or filth arise in plenty at the top thereof, and when you have left it so a while, it may be easily taken off, because of the thickness it contracts.

The boiling being yet a while longer continued, pour in the same quantity of Vinegar again, and diligently separate the Scum as afore: This pouring on of Vinegar, and separating of the Scum, may be repeated yet a third time, and oftner, whereby the purgatory water may be made altogether pure, and that there appears not any more spume.

When all this is done, cast in upon this water two or three Ounces of Burnt-Alum, most finely powdered, stir all well with a Spatula, whereby the Salt-petre may shoot into longer Crystals.

Then after this, pour out the purgatory water into the aforementioned deep Vessels, and cover them over with Linen Cloths, that the Liquor cool not. Let it stand thus one hour or two at most, and a yellow slime will settle to the bottom: Then let the water while it is yet warm flow out hence, into other Vessels made of wood, and especially of Elm, and which are large enough; or else, you may let it run into Copper Pans set deep in the Earth, for the better coolings sake, which cover over very neatly with Cloths, that so the Crystallization may begin from the bottom, and not at the upper part, as we see it wont to happen, where it is not kept by Coverings from the External cold: And we also observe therein too, that the Crystals shoot not into that length, as when the Crystallization begins from the bottom.

Let them stand thus for two or three days, until you see no more Crystals generated, which you may on this wise try.

Put some of the Lixivium in your (little) probatory Vessel, wherein, if you find that there are no more Crystals generated, you may take out the rest of the Lixivium: Then take out the Petre with an Iron Spatula (or Truel) and put it into a Vessel that is full

of holes in the bottom, that so all the Lixivium may be the better separated therefrom. And you shall have your Salt-petre pure and white, and freed from its Salt.

Forasmuch as the Lixivium here separated hath as yet some saltness in it, it may be mixed with other strong Lixivium to be (agen) boil'd up, for the production of the Crude Salt-petre is usually holpen forward there-withal.

Some there are that for the better purifying the Petre, do put Calx vive in together (with it) whereby the water becomes most white like Milk, and the Salt-petre gets a greater fairness.

You must withal observe that during the time that the purifying water is contained in the Copper, your fire must be most gentle, least by overmuch boiling you get some damage, for a little fire is able easily to cause (a too vehement) ebullition, and when it has got strength (or the start of you) it is hardly allayed again. The scum which you take off from it you may pour upon ashes as if it were a Lixivium, that so nothing (from whence any profit can be hoped for) may be lost.

There is sometimes seen to stick to the bottom of the Copper (especially when it is used about many boilings) a certain stony and hard substance like Tartar, which unless it be taken away, your Copper will easily suffer damage under that same matter and be burnt.

The earth and ashes left, after the weak Lixivium (hath past through them) are to be laid up in some convenient place, and there kept for four years or more, that so they may be again apt to yield a-new more Lixivium by extraction; which, that it may be

the better and easier done, there must be made in them (many weeks afore they are wrought upon) by digging some Pits or Gutters, that so they may be freed by the heat of the Sun from that moisture wherewith they as yet abound. Nor do the ancients so much wander from the Truth in that they suppose it much better and more profitable to keep all the earth under a roof or shed, and that it will be far sooner reduced unto a fitting goodness, than to lie open to the weather, for much of the Salt-petre is corrupted (or spoiled) with an abundance of moisture, especially with the Rain it self: For it needs only a little wetting whereby it may be generated, and extreamly shuns, or is injured by too much moisture.

Besides these ways, there are many that mix with this earth that is yet contained in the Tub the Saw-dust of Firr, or some other Wood (the height of) a Fingers length (on it): And they perswade that Salt-petre is also generated and multiplied from that fatness which is mixed with the Saw-dust, and that the earth prepared on this wise can be so changed in a years space (so it be kept in a dry place) that it may be again made use of as afore. Yea and they suppose too that they can do much here, if they pour upon such a barren (or lean) earth, thus lying in a dry place, the reliques or remains of the dyes, which the *Dyers* are otherwise wont to throw away, and evident it is that they are aluminous, but yet not so frequently.

Besides such waters of the *Dyers* they are wont also to mix soot with their earth, (yea and the ashes too of which Lawndresses do commonly make their Lee;) that so it may be made the more fruitful and may be the sooner brought to use.

This only is to be noted, that there are sometimes found earths that give a thick black Lee, which being used by it self is too fat, to which is to be added a leaner and dryer earth, that so the Salt-petre may be the better and more plentifully generated.

The way therefore how, and the instruments by which crude Salt-petre is purifyed, is shown by the 6 and 8 Figure (in *Lazarus Ercker's* Book I think he means.)

The manner of purifying the gross and blackish Salt *that comes out of the* Salt petre.

That black or rather ashy colour Salt, which is found in the Copper while the nitre is prepared by boiling, and likewise in the narrow Tub or Vessel, may be reduced into very good Salt, and very convenient for daily use, and no ways at all hurtful to Man, if it be but duly purified; which said purification is to be thus ordered.

The Copper being well cleaned fill it with most clear Well-water, put fire under it and make it boil, throw in the said Salt by times (not all at once) into the boiling water, that so it may be dissolved; which, that it may be the sooner and better done, stir it continually with a *Spatula*, when you think that it is all dissolved pour out the Lixivium into some Vessel or Tub, & you shall see the grosser part will settle to the bottom, and the Lixivium will clear up: When you perceive this, pour this clear Lixivium again into the cleansed Copper, and boil it so long till the Salt settles to the bottom, which take out of the said Copper with a perforated Ladle, and put it in a Basket that is placed over the Copper, that so all the superfluous Lee or moisture may again run down

into the Copper, and yields (or leaves) the Salt perfect and dry.

Some there are who afore they use this Salt about domestick affairs, do decrepitate it first, and perswade themselves that it becomes thereby the more virtuous (or strong.)

What remains behind of the Lixivium in the Copper, you may boil it up like as you would any other Lixivium appointed to be Crystallized, then pour it out into the Vessels destinated to that purpose, and you shall see Salt-petre to be generated in them; for seeing the said Salt proceedeth out of the Salt-petre, this Lixivium cannot be wholly void of Salt-petre, and therefore may it be separated from that Salt by the aforesaid way, and be purified.

But you are to note here, that where there is too great a quantity of Salt-petre permixt with the said Salt, or that the Salt it self is too black and impure, that Salt cannot get its due lustre and whiteness by barely one such a purifying Operation, and therefore there is requisite a reiteration of this Operation, so that it be again dissolved in new water, and be purifyed, whereby it may become altogether white.

However, such a black and impure Salt, may be purified even by this way (following.) Pour the solution it self, while 'tis yet hot, (the water I mean in which the Salt is dissolved) upon the ashes which a Lixivium hath been already poured on before, and you shall see the Salt Lixivium to be wholly purified: But yet all the Salt which is extracted thence, is not sufficiently white, but that which is gathered last of all is yellowish, and therefore must be yet once again purified. Note also here, that when such a Lixivium of Salt is poured on the ashes, they must be well edulcorated (after the operation is finished) least the

Salt sticking in the Reedy or Bull-rush-bottom should give an unfitting saltness to the Lixivium that is next poured thereupon.

And thus have you the common method of boiling and preparing Salt-petre, in which you meet with what may be well disallowed or rejected, *viz.* it is extreamly tedious, nor is it at all gainful, for out of a centenary of Lixivium, we have no more than three or four pound of Petre; to get which too, all the rest of the water must be done off by evaporation, which is a long time doing, and requires no small costs. Yet I will shew in what follows, by what means this inconvenience may be prevented, which I have proved by mine own experience.

The way of augmenting the Crude Lixivium afore its boiling.

The Salt-petre boilers have hitherto variously sought after the way of augmenting (or fortifying) the Lixivium of Salt-petre, that is, of causing a more plentiful provenue of Salt-petre, in the Water remaining of the extraction of Salt-petre, but in vain, because they were ignorant of the lesser proof which all things here are tried by. Its augmentation is done on this wise.

Take of a Lixivium, a Centenary of which contains *iiij.* ℔. of Nitre, pour so much of it as a Tub or Vessel will hold, upon new earth, let it stand for twelve hours; then draw off the Lixivium, and as much as you find wanting of what you poured on (which may easily be known by the emptiness of the measure which it was in, afore you poured it on, and in which it is now gathered or received again) pour so much simple water on the Earth, which draw off in like

manner, and mix it with the Lixivium, and you will then have the same quantity that you had in your Vessel afore. This done try the Lixivium by the lesser experiment or proof and you will find it to contain *vj.* ℔. of Nitre. Pour this Lixivium that contains in it *vj.* ℔. of Nitre upon other new earth, and proceed on the manner aforesaid, and you shall have your Lixivium to contain *ix.* ℔. of Nitre. You may pour this a third time upon other new earth & proceed on with it after the aforesaid manner, and you shall yet have more Nitre out of a Centenary of Lixivium. But you must be always wary in this Operation, that you draw off, neither more nor less Lixivium from the earth than you had before in the Vessel. These things it pleased me to add, concerning the second pouring on of water, meerly for the experiments or proofs sake, whereby we may be made certain of the augmentation thereof (forasmuch as the Lixivium doth by this means hold in it more Nitre) and that we may be forced to acknowledge its augmentation even in that way. Then after this is done, you may use the weaker Lixivium instead of water, to fill up the first measure, and so the Lixivium will be the easier, and more augmented; and we may in a short time have sufficient quantity hereof for to boil. And although this augmentation of the Lixivium requires a great deal of labour, yet are all the (pains, &c.) recompensed, because we hereby get in one Weeks space, and with less expence of Wood, far more Nitre than by the other common ways: But yet there are requisite more Vessels for this kind of working, wherein the separated Lixivium may be kept.

I will also give the Reader a manuduction here, by what way the boiling of the Lixivium is to be ordered, or contrived: First of all, this is well to be regarded, that forasmuch as a great boiling requires

a great quantity of earth, and yet there does not at all times, earth of a like goodness offer it self (especially seeing a Man cannot make proof of it all) upon which the costs and labours (necessary about it) may be well (or at the best hand) bestowed: It seems wholly expedient, not to make such a great Coction (or boiling-trade) but to do it with only three or four Tubs, that so we may choose only the best convenient earth, which we may dig in the Cities (or Towns) out of Houses of long standing, and out of Stables, but yet not too deep: Such a Lixivium as contains in an hundred weight of it eight pounds of Nitre, may be increased to eighteen or twenty pounds, if we proceed according to the aforesaid method. And therefore such Nitre boilers as inhabit those regions where there is scarcity of Wood may give hereunto good heed.

Now the Lixivium augmented on this wise, doth not attract all the nitre out of the earth it self, but there doth yet some always remain behind: And therefore you need not presently throw it away, but pour thereupon some simple Waters, which after it hath stood thereon for some hours, draw off again, and you shall have a weak Lixivium, which you may try by the proof, and proceed on therewith in the method of augmenting it, and so you will have a continual labour.

This likewise is to be observed in an especial manner, let the Work-house in which this boiling up of your Salt-petre is done, be very low, and covered with thatch, that so the heat may be the better kept about the Tubs, and this Operation may be done as well in the Winter as in the Summer, and that the weak Lixivium may not at all congeal.

And now, even as Salt-petre is made by boiling,

out of the Lixivium which is made of Earth, even so is it of that Lixivium which is gotten out of Stones or the Lime (and Dung) Arches (afore-spoken of;) only there is this difference, That this last way of my contrivance (with stones &c.) is easier, and yields more Nitre. Such as are pleased with this kind of work may set about it, nor will they bestow their Labours in vain; there may be abundance of things, and those wonderful ones too, effected with Salt-petre, as I have abundantly demonstrated in my foregoing Writings, and shall in my following ones too, more clearly demonstrate if God vouchsafe strength and abilities.

But before I come to the practice it self, and to describe the benefits of Salt-petre in specie (or in particular) it is wholly necessary to shew how wonderful, yea how incomparable a subject, that Salt-petre is. And this thing I have already handled at large in the *Second Part of the Philosophical Furnaces*, in the *Second Part of the Pharmacopœia Spagyrica*, but especially in my *Miraculum Mundi*, and in the *Explication*, and *Continuation*, and *Defence* of the same.

Here the Author runs out into a large digression in his own vindication, upon the occasion of certain Letters sent him by one I. H. S. *who Stiled himself the Son of* Sendivogius*; in which Letters he highly extols the Hermetick learning of the Author, but blames him for Writing so plainly of great secrets, and exhorts him to be more sparing and obscure for the future. Withal offering his service (and begging the Authors leave) to defend his Person and Writings against* Farnner *and others. The Author not taking his advice nor yet accepting of his service (suspecting him to be a self designer) this* I. H. S. *afterwards published a Book entituled* Lucerna Salis

Philosophorum. *In which he offers to teach the making of the* Philosophers-stone *at a price or reward; and reproacheth* Glauber *whom he before had so highly magnified in several Letters, advising People to avoid his writings as Sophistical. In this Treatise he mentions a Prediction or, Prophecy of three Monarchs that were to appear in the World: The first of* Paracelsus*, concerning* Elias *the Artist. Secondly, That of* Cosmopolita *of the coming of the* Northern Monarch. *Thirdly, That of* Jacob Behmen*, That a Lily shall bring forth Flowers from the North. He intimates that himself is the* Elias *of Arts. Secondly, That some* Northern Monarch *shall do mighty things in the World: And Thirdly, that the Writings of* Jacob Behmen *should be again Printed a new. After the Author hath shewed the ill dealing of this* I. H. S. *with him, and vindicated himself, then he proceeds briefly to Comment upon these three Predictions or Prophecies.*

By what hath been said, may the Candid and well-minded Reader judge what judgment is to be had of this Monarch of Arts I. H. S. Every one that reads them will find whether or no such a Monarchy is to be expected from such a ones Writings. But now that I my self may likewise here produce my opinion, concerning *Paracelsus* his meaning where he writeth, *I say that the most eminent Secrets will not be known afore* Elias *the Artist shall come and teach them*: (But I pray) what hath the holy Man *Elias* to do with Arts? verily no thing at all. *Paracelsus* minded or pointed at some other thing, he well knew, that no body comes unto such knowledge, unless by Revelation from God, by godly Prayers, and by searching: This is the true *Elias* which *Paracelsus* speaketh of, if (*viz.*) the word *Elias* be read backwards, and E changed into A: For then 'tis the same with *Salia* (that is, Salts) such

as these (*viz.* salts) are known unto, to them is *Elias* a master or teacher. And where the said *Paracelsus* speaketh of Salts he adds *Alchimy finds it (to be) in Nitre*: Hereby shewing and pointing at *Salia*, Salts, which word being read backward is *Elias*? And this is my opinion as touching the coming of *Elias* the Artist, and I do yet (again) say, that to him to whom Salts are known, hath *Elias* appeared. And let this be sufficient to have spoken of the first Monarchy of I. H. S. and what is to be judged thereof.

Now follows the Second Monarchy.

As for the second Monarchy, he alledgeth the Prophecy of *Paracelsus*, which runs thus: *A Lion shall come from the North, and become the Monarch of the World*: Which Prediction is not at all to be understood according to the Letter. What has *Paracelsus* to do with the Northern Lion? What business has he with the Monarch of the World. Some there are that endeavour to attribute that Prophecy to one or other of the Northern Kings, but yet that was not in the least *Paracelsus*'s meaning, he drove at a far other-guess business, and by that Lion he meant Salt-nitre, which is wont to be brought unto us by the Northern Winds, Rain and Snow, and that several times yearly as is well known unto all; hereupon many amongst the Philosophers, and some of them the latter Philosophers, have filled great Vessels with the Rain and Snow that comes out of the North, and aimed at the preparation of a Tincture thereout of, but they found nothing else but Salt-petre, which to get, I have shown a much shorter way.

Paracelsus, *Basilius*, and others have Written many things of the green and red Lion, all which are to be understood of Salt-nitre, which may most easily be

transmuted into the green or red Lion, concerning which thing I my self have made mention in many places.

But some or other may reply, How can it be said that the Lion shall be expected out of the North, if *Paracelsus* did by it understand or mean Salt-petre, for that cannot be said to be expected (or waited for) which hath always been? Surely the approach of this Northern Lion is not to be supposed or thought to be as to the outside aspect and known use, but only according to the internal virtue, & the Treasure therein hidden; concerning which, the Philosophers have written many things enigmatically, and kept up all things most secretly. Verily he to whom the inside of Salt-petre is known will be able to report wonderful things, for 'tis that only that is the true Monarch, and is able to institute a good governance for those that possess and know it. This Monarch will not be to any one a stirrer up to kill others, and to take from others their Goods and Kingdoms, and to disquiet the whole World, as we see other Monarchs do, but he will bring Peace and Concord, and will perswade the Soldiers to stay at home and to get their food by the labour of their hands, and not to shed the blood of the innocent; he will injoin the greedy Usurers to be beneficial to the poor & to put an end to their immoderate usury; he will shew to the Divines, that all their contentions are vain, and that they cause nothing but inquietude, dissention and discord amongst Men, and will require at their hands to Preach concerning friendship to, and love of ones Neighbour, which under this unprofitable contending is wholly lost, and to banish away all hatred; and contrary-wise to strive after patience and Christian humility. These kind of Doctrines and governance the inward or inside knowledge of the

Northern Lion will bring with him, and not any War or shedding of Blood. But afore the said Lion is tamed and made gentle, he is very ravenous, and the venomous Basilisk, and devouring Dragon, preying both upon Men and Beasts, demolishing Cities and Castles, and destroying Goods and Men together. Thus have I in brief expounded my opinion of the coming of the Lion from the North, let everyone believe it as he listeth. And thus much shall suffice for the Second Monarchy, and how it is to be understood.

Now follows the third Monarchical Prophecy.

As for what concerns the third Prophecy which I.H.S. doth also make mention of, (& will have it) to concern a certain Writer, whose name is *Jacob Behmen*, who exercised the *Shooe-makers* Craft, and published many Theological and also Chymical things, which *John Beth* doth again Print: As far as I know by his writings, he was an honest Man, but I do not know what he understood in Alchimy; but however this is evident, that he never exercised or practised Chymical Operations, and that his Chymical writings are most difficult to be understood, but his Theological writings are read by many. My opinion concerning the business is this, that this same I. H. S. was minded to quarrel with me, that so there being a brawling bred between us he might make his Books the more saleable. I have therefore thus plainly answered him, but if he proceed on in contrarying and opposing me, I shall be constrained *Nolens Volens* to meet with him another kind of way, for I am even wearied and glutted with contention. If he will needs brawl and scold let him do it with those that have no work to

do, such as he himself & his associates are, who have no Family to rule and look after, I can for my own part bestow my time better than in those contentions, which bring no profit, but only to the Bookseller, whose Books before they are known sell well.

But to conclude, I will in a few words open the ill affected mind of J. H. S. to the Candid Reader. When I had lookt into his Treatise, and perceived that he had ranked me amongst the Sophisters, I showed to some of my faithful Friends, the Letters which he had written unto me, that so I might hear their Judgment concerning them; verily, there was not one amongst them all, but wondered at the wicked mind and falseness of this Man: Yea, one of them did afterwards inform him by his Letters, what way I had purposed to take, *viz.* again to wipe off that undeserved Title he had put upon me, and to defend my self against such Monstrous Impiety; To which he received from the said *J. H. S.* an Answer, which he likewise shewed me, wherein (’mongst other things) he pretends, that the cause of his hatred [against me] was, because I had in some places written so very clearly of the Universal Medicine: Yea, and he farther adds, that it is no such great despising one, or Contempt to call one a Sophister; for *Geber* was accounted for a Sophister, and yet was he a King. And that if I wrote against him, he would do the same against me, and endamage not only me, but my Children too; which Epistle is yet kept safe. Now let any Honest Man consider whether this be a Human, or Diabolical action.

Some, when they heard this, perswaded me to pass over all in silence, and that there would come of it such another brawling business as was with *Farnner*,

whose Exhortation I yielded to, that I would not so much as once answer him, how great Lies soever he told, but rather purposed by referring all till the next Spring, to get me Friends by the benefit of my very eminent Inventions (God willing) which should not only intercede, or stand up for me, but also for my Children too, after my Decease: I doubt not, but that there maybe some principal persons found, which are capable of overturning such Inhuman Perverseness.

These few things was I constrained to add (in a Parenthesis) for the defence of my Writings, thereby to paint out the deceitfulness of Men, and to discover what is to be opinionated concerning such turn-coated Foxes: The which I entreat the Reader not to take in evil part, but to accept of the Secrets laid open in this Treatise, as a Reward for his pains in reading this Apology.

Now follows the Most Potent Lion, and Monarch of the North; to whom none in the World may be compared, nor *did* ever any excel him in Glory and Power, or *shall be* like unto him.

But before I begin to write any thing of that Omnipotent Monarch, I have thought it profitable to add here in this place, for the better knowledge of the same, *Paracelsus* his Prophesie, as I met with it, whereby any one that is skill'd in nature, may sufficiently see, that *Paracelsus* did not mean a King, but the great Philosophical Mistery, and would point

that out unto us: His Words therefore are as follows.

The Prophesie of Dr. *Philip Theophrastus Paracelsus* of the *Northern Lion*.

They will not leave me in my Sepulchre, but will hale me out thence, and lay me down towards the East: And I do foretell unto you, that there are three great Treasures hidden.

1. *The First is at* Weyda*, at the* Alps *of* Julia.

2. *The Second is between* Suevia*, and* Bavaria*: The place I do not poine at, because of avoiding the being the original of many evils, and because of the shedding of Bloud.*

3. *The Third is between* Spain *and* France.

He now that shall find these, will be carried in Triumph, and be admired by all: Likewise between Suevia *(or* Scawben*) and* Bavaria*, there are Books which contain no mean and common Artifices, that will offer themselves together with precious Stones and a Carbuncle.*

I will here likewise declare the Age of such as shall find them.

The First will be 31 years old.

The Second 50 years old.

The Third 28 years old.

And these shall be found not long after the exit (or ruine) of the Austrian *Empire, and it shall happen, that in this very same time, a Yellow Lion shall come out of the* North*, which shall be Persecutor of the Eagle, and at length its Conquerour: He shall subject under this Empire all* Europe*, and a part of* Asia *and* Affrica*, and shall*

profess the good and Christian Religion*, and shall have many Followers thereof. It shall first of all be a most troublesom work for him to chase away the Claws of the Eagle out of the Empire; but afore this comes to pass, there will arise extreamly great Dissentions, and various Grudges amongst all Men in all Countries; the Inferior will rise against the Superior, so that there will be a great tumult, but yet notwithstanding the Members shall suffer the punishments of their wickedness, and the head abide safe.*

Nor shall here be an end, but there shall be kindled a great fire, which shall turn all into ashes, but the Omnipotent God will be at hand to help his own people, for there shall yet remain a small sparkle of Piety, which will take rooting, and encrease by little and little, and strike a terrour into the plundering Robbers, and make that alive, which seems to be dead. The Enemies and Persecutors of Christ, will call themselves powerful, and every where bring in great Devastations, insomuch that there will seem to be an end of our Actions.

Now whilst the Enemy is placed in the very topmost pitch of fortune, the most Just God, will (by the help of a small company) destroy, and utterly root out the Northern Lion, accompanying him, together with all his Clerks; yet abundance shall be Converted, and believe on his Omnipotence, and in the most Holy Name of God.

When therefore this Lion hath gotten the Eagles Scepter, every body will reverence, and run after his Majesty: He shall be powerful in Deeds and Counsels, and the Subjects that now refuse him, shall receive him with the greatest joy, and acknowledg him their Superior.

Then must the aforesaid Treasure 'twixt Suevia *and* Bavaria *be found, which is equivalent to the Riches of twelve Kingdoms, where also lies hid, a Carbuncle, as big*

as an Egg, richer than any price.

The other Treasure that lies between Spain *and* France*, is indeed great and potent, but yet it gives place to the former, it shall be manifested at the entrance of the Lion that comes from the North, and, which shall take the Eagle, and then at length shall men consider well what I* Theophrastus *have been.*

Now when the praised Northern Lion hath finished his Course, and hath broken the edge of the Eagles Claws, then shall Peace and Concord every where speedily and vehemently fly thereunto, but yet he will send afore, some signs and tokens by which it shall appear unto us, that the Messengers sent forth shall declare the coming of the Lord. There is yet one only thing that I Theophrastus *do beg at your hands, that ye do not any of you impute unto me the things which I now lay open; forasmuch as I cannot be against the Will of God, which I must put in execution in the Nature of things.*

These are those Secrets of Secrets that I was willing to open unto you. This Treasure far exceeds other Treasures; my Arts are hidden in that place betwixt Suevia *and* Bavaria*, and they are these,* viz. The true Transmutation of Metals of a short way: The Universal, more than perfect: The *so much talk'd of* Aurum Potabile*, and* Philosophers stone*: But he that by the guidance of God has an entrance opened to the finding of them, shall there find (besides other stones) a precious Carbuncle, which lies hidden in a little Box cunningly made by Men, and covered over with Gems; the Key of the little Box is in a Golden Coffin, the Golden is put in a Silver one; the Silver one in a Tin one; and it lies in such a place as God hath chosen, or appointed.*

The Omnipotent God will bestow upon him that finds them his Divine Benediction in all his Affairs, and will

give him power to oppress all evil, and to draw out good; whereby things necessary may likewise be obtained from God who is able again to reduce the world he made of nothing, into a nothing: Let the Son and Holy Spirit be also with us, the Blessed Trinity, for ever and ever. Amen.

First of all, *Paracelsus* saith in this his Prophesie, that Men shall draw him out of his Grave, and place him towards the East; who is so simple as to think that this is to be understood according to the Letter? What Profit and Honour would thence arise to *Paracelsus*, if his Bones were digg'd forth, and translated into another place? Whereas if he were even now living, he could not desire a better and more excellent Tomb, than that he lies in. Whilst he was living, he was not so proud; he very well knew that the Honours of this World are fading and vain. Nor did he ever require, that any Epitaph should be erected to his Honour: Although (when his Friends had taken care to lay him in a decent place.) The Magistrate commanded a very notable Epitaph to be engraven on his Tomb-stone for a Testimonial of his Deeds, the which Epitaph will bring him Praise enough while the World lasts. The said Epitaph runs thus.

The Epitaph of Theophrastus Paracelsus*; which is to be seen Engraved on a Stone at* Saltzburg*, in the Hospital of* St. Sebastian*, erected against the Wall of the Church.*

Here lies Buried *Philippus Theophrastus*, an Eminent Doctor of Physick: Who by a Wonderful Art, took away those

> Dire Maladies, the *Leprosie*, *Gout*, *Dropsie*, and other the Incurable Diseases of the Body; and Honourably Distributed, and gave his Goods unto the Poor. He Died the *24th.* Day of *September, Anno 1541*.

How could he be possibly more praised after his Death, than I see to be done by this Epitaph. But yet I would not have you think that I desire you to account of my Opinion as if it were Gospel. It pleased me here to put it for this end, to shew, what my thoughts are, as concerning this thing, every one may believe as listeth him, but as for my part I will in no case believe, that the Prediction is to be explained according to the Words or Letter: But whereas it is said, that he shall be taken out of his Sepulchre, and put in another towards the East, I do thus interpret it: That if any shall understand his Writings, they shall thencefrom perceive what, and how great a one he was, and so will make his Cause their own, and will defend his Writings against Inimicitious Zoilists (or Carpers) and Ignorants, who as well since his Death, as whilst he was alive, entreated him very inhumanly, and as it were, oppressed him with Lies, and Infamous Libels, and so do they take him as it were out of his obscure Tomb, and place him towards the East, by which it may appear to every one what an incomparable Man he was; to the performance of which, I will not refuse to lend my poor help, though small, (God permitting.)

He doth afterwards add, that there are three great Treasures hidden, which whoever shall find, shall triumph very nobly; the places which *Paracelsus* points at, and where those Treasures are hidden, are,

where the Metals are digged; and indeed such places they are, as in which there lies hidden the highest Tincture, and which otherwise is not to be found neither in Gold, nor Silver, nor in all the other Metals, or Minerals.

I do think that *Paracelsus* knew these Minerals, and made a Tincture of them, and thereupon was willing thus obscurely to describe such Treasures.

He that shall find, that is dig it forth, and shall know the way of preparing a Tincture thencefrom shall doubtlesly be magnified, especially if he will disclose them unto others.

Now I believe that if these Treasures should be digged out by some godly, honest, and wise Man, (for the finding them is denied unto reprobates) would not hunt after or affect vain Glory, but be contented in that he knows it: But it is not convenient to open or disclose what this *Minera* is, wherein God hath put such a singular Tincture, and which he hath hidden from the proud and covetous. But seeing that all things reside in the hands of God, who can give unto his own People that which he denies unto others, I do not at all fear any one's exhausting so easily a Treasure lying so profoundly hidden, although I should make known this subject.

Thus much I have experienced, that there lies in them a much more excellent Tincture than in the other Metals or Minerals, but I do not boast that I have thence drawn the universal Tincture and made it fix, for time and occasion would not as yet permit it. But I have often times in a particular way instituted a graduation of *Luna*, by the help thereof, insomuch that it hath left some fix'd *Sol*: Whereby I have observed, that many excellent and profitable things may be effected, when that volatile Tincture is

by the rule of Art made fix'd and fluid. However I will make trial, if God shall vouchsafe me life and strength, and see what I shall thence obtain.

As concerning the name of the subject, it is called *Magnesia Saturnina*: which is found between *France* and *Spain* in the *Piedmont* Mountains; 'tis commonly called the *Piedmont-magnesia*, but 'tis very much unlike (to one another) for some of it is of a yellow colour, and this the *Venetian* Glass-men use, when they make Glass, that it may become pellucid and transparent. The Glass doth at first become of a purple or Amethist colour, but this colour abides not one hours space in the subject, but it evaporates, because it is not fix'd enough as yet, and then the Glass becomes wholly transparent and bright, but if they would have the Glass hold the purple colour, they presently work it up as soon as ever the Magnesia is therein molten. Many years agoe, when I attempted operations about things of less moment, and changed Crystals into variously colour'd Glasses, I found that this purple colour was not fix'd in the Fire; and that the Magnesia had in it many impurities, whereby my Glasses were obscured: But yet I attempted to extract from thence the pure Tincture by Art, and to free it from its unclean fæces, and to this end used various Menstruums, but yet effected nothing; until at length I saw that by mixing that magnesia with fix'd nitre, it was by boiling them in a strong Crucible, opened by the Nitre, from whence proceeded a delicate purple colour. I poured out the Mass and powdered it, and extracted it with hot Water, and passed the Liquor through a Filter, and then had I a most dainty purple fiery liquor, which did almost every hour (standing but only in the cold) change colour, so that it became one while green, then sky colour, another while of a blood

colour of its own accord, then again presently it received other most elegant colours. Out of which liquor I did a-new separate the more pure part, and I used this red powder to tinge my Glasses, the which thing I indeed obtained, but because the Tincture was more fusile than the green stone it self which it was extracted from I was constrained to leave it off. However this I experienced, that there lies a mighty Tincture hidden in the said Magnesia, and thenceforward I pondered upon the business more deeply, and adjoined the Magnesia thus fusile unto *Luna*, and then I found some *Sol*: but I could not bring the work to any fuller perfection because of the want of time, & store of business. I am of that opinion that (by Gods permission) a Tincture may thence be extracted for Metals and Animals. These are my conceptions, but I well know, that the ignorant *Momus*, or Carper, will hence take occasion of mocking at me, but this I cannot at all hinder.

This *Saturnine Magnesia* in the *Alps* of *Julia* is much purer and excellenter than that *Piedmont Magnesia*, is and there is in it more Tincture, the which we may extract most easily by the help of Nitre, and albeit the *Minera* be of a yellow colour, yet is there extracted thencefrom by the benefit of Salt-petre, a most elegant Tincture, of a greenish colour, and is likewise one while purple; then sky colour, then again red, and by and by again it assumes a green colour, the which also is so fusile, it fixeth every *Luna*, and doth in some sort make it golden. These two Minerals I have often times handled, and have thencefrom gotten the green Lion, but have not proceeded any farther.

The third Treasure 'twixt *Suevia* and *Bavaria*, is not much unlike unto these two, and without doubt such

kind of Treasures will offer themselves even in many other places where such Mountains & Mine-pits are found out, were but the right way of digging out and ripenning them, but known unto us; which knowledge is only granted unto the Sons of GOD.

These things was I willing to mention, that so it may be known what my opinion is as touching those Treasures. For I am firmly perswaded that the universal Medicine may be thence prepared, especially out of that which very much abounds shining in Metal resembling a vein of Lead, and yet yields not any Metal by fusion, because of its exceeding volatility, and of wholly flying away in the form of a vapour: Yet nevertheless, that Northern Lion is able to master it and to fatten its young ones thereby. And if GOD shall vouchsafe any one such a Treasure, he will verily find more Art-containing Books than is indeed needful. And whereas *Paracelsus* adds that the Lion out of the North will (after he hath found the aforesaid Treasures) become a Potent Monarch, this is easie to be believed, for he is enriched with the digged-out Treasures, and is able to manage his affairs as listeth him. He will be able to give whole Kingdoms unto others, and yet his power will not be diminished, he will in like manner be able to institute good precepts and government, and there will be a notable affluence of all things, insomuch that there will be nothing wanting. There are many Men would lead an honest Life, were they not constrained by poverty and need to do evilly.

The Northern Lion is able (when he hath found the Treasure) to abolish all these vices, and contrarywise recover a good political Governance, Peace and Quietude. For Wealth and Riches are able to transmute Strife into Peace, and these the Northern

Lion can abundantly exhibit, insomuch that he may deservedly be Stiled a most Potent Monarch. But if so be that evil companion, *viz.* Sulphur be joined unto him, which may provoke him, he becomes more venomous than the Basilisk, and is able to kill in a moment of time, both Men and Beasts, yea to ruin Castles, Mountains, and Fortifications, and to annihilate them. But on the contrary when he hath found the Treasure, he becomes tame and liberal, and lays off his anger, and bestows on all Men sundry most acceptable gifts.

Furthermore, *Paracelsus* saith that a yellow Lion shall come out of the North, which shall dull the Eagles Claws; all which verily is to be only understood concerning Salt-petre's transmuting virtue much conducing to a perfecter augmentation of the Metals, from whence ☉ and ☽ together with the Carbuncle may be atchieved; and not at all of a certain Northern King and the Roman Eagle. For the yellow and fiery Lion which is here treated of, is fixt Nitre, and if it be joined to the volatile Eagle, that is, to the volatile Corrosive Salt; this (Eagle) is overcome by that (fixt Salt) and is tamed, because the Corrosive virtue which it abounded withal, is taken away: So that he that is skill'd in Chymistry may well enough understand what *Paracelsus* drives at, and that he does not at all mean those Monarchs and Rulers, as may be gathered out of his Manual, where he Writes, that the Blood of the red Lion is to be commixt with the liquor of the white Eagle, and that from them by a due Coction is the universal Tincture to be extracted.

Therefore they do evilly that interpret the Writings, and these predictions of *Paracelsus* otherwise, they earnestly expect external Monarchs,

but experience hath taught that those Lions do bring with them nothing but an hungry Stomach, which can hardly be well filled (or satisfied) with the Sheep and Lambs of all Countries. And I pray God, turn them from us and continue unto us Peace and Concord, which is most of all to be wished for.

Moreover *Paracelsus* further saith, that he was constrained to detect this Treasure and hidden secrets, to shew the nearest way to the description of the Philosophers-stone, which (Stone) whoever finds and knows how to open the Gate, he shall find a Carbuncle as big as an Egg, together with other Gems, which are conserved in a Chest made of Gold and Gems, and this Chest in a Golden Sepulchre, the Golden one in a Silver one, the Silver one in a Tin one, on which the Key is placed.

And now will there be any one so foolish as to interpret this according to the alleaged Words: No certainly unless he be deprived off the light of Nature. It was never heard off, that ever there was any Carbuncle found of the bigness of an Egg: neither the *Roman*, nor *Grecian*, nor *Persian* Monarchs are reported to have had such an one, and from whence then should *Paracelsus* only have the same? All Men therefore see that this Prophecy is not at all to be understood barely according to the Letter. Now in that he calls the universal Medicine a Carbuncle, he does not therein offend, because even other Philosophers have imposed upon their Tincture this very name, and this meerly because of the form it has, for if there is to be a certain Tincture that should tinge the white Metals into yellow *Sol*, it must of necessity be red; and therefore some of the Philosophers have likewise called their Tincture *Hæmatitis*, for likeness sake.

Nay more, forasmuch as it is mentioned of the Carbuncle that it shines in the night like a burning live-Coal, and yet such a stone was never any where seen or found, it necessarily follows that those things which are delivered thereof are not to be understood according to the Letter. The chiefest *Lapidaries* do Witness that they never saw it; the Oriental Rubies are the chiefest red Gems that we know of, of which there is scarce one found that is bigger than ones nail, which notwithstanding, if it be pure and shining, is sold for many Thousands of Duckets. In like manner, Granates are red, and of a meaner price, and shine no more in the Night than Rubies do. But that a shining in the Night like a live-Coal, should be attributed to a Carbuncle, is not done without cause; verily, the Authors of that thing are not at all to be supposed to be such Merchants, continually handling Gems, (as if they had ever seen such a stone): No, but they were the Philosophers themselves, whose words which they wrote of the prepared Tincture, the after Writers did falsly construe their meaning and understood it literally, perswading themselves that there was such a Carbuncle in the nature of things. Therefore we have no reason to induce us to believe that the ancient Philosophers did in very deed describe or mean such a Stone as shines by night, but let us rather perswade our selves as being thereto constrained by the Verity of the thing, that they did not in the least mean a natural stone, but a stone prepared by Art, and their Tincture. And this, the very Name it self seems to point out; for *Carbo* signifies a greater Coal; and *Carbunculus* signifies a little, or lesser Coal.

Now if so be that any one would endeavour to prove with Oaths to this blind, proud, and wicked World, that such a red stone shining by night, may

be made of a Wood, or stone Coal, certainly every body would mock at him, and would say, That he propoundeth meer Lyes; and therefore no body ever dared (though he were never so certain of the Truth of the thing) to write ought of the same.

But some or other will say, Whence come you to know these things, and by what Notes or Testimonies do you prove that you are to be credited, as touching this Business, seeing no body ever writ that these things were so? To such an one I answer, That I leave every one at his liberty; for whether he believes my Sayings, or believes them not, 'tis all a case to me. However I say, that I can change by melting, a meer black Coal by the help of a Salt (but not common Salt) into a most red stone in one hours space. For Coals are nothing else but a fixt and volatile Sulphur, which if we will fix it, will be fixt; if we will volatilize it, it will be so. A wood Char-coal (though there's much difference amongst them) should it lie shut up firmly & most tight in an Iron Vessel even for an hundred Years so as that no air get in, and should be (all that while) kept in a most vehement fire, yet would it not shew the least sign of being consumed or changed, but let but the air come unto it, and it will be reduced into ashes in a moment. If now you have understanding and sense, consider with your self more largely as touching this thing, and you will find many profitable and good things if GOD shall open unto you the Eyes of your mind: This red stone having the form of Glass, being poured out of the Crucible, shines in the dark like a burning Coal, according as is the Coal you prepare it of. And albeit that this Glass can perform many good things in Medicine and Alchimy, yet it is not at all the Stone of the Philosophers, which they call a Carbuncle, for that must be fixt, and resist the Fire, both which are

denied to this Glass to be, for it is volatile, and can easily be changed by the Fires force.

I have several times made this stone of Salt and a Coal, but never had time as yet to bring it to a perfect fixation, and therefore I cannot determine certainly, what may be farther hereof made. However I would not have the lover of the wonders of GOD to be unacquainted with this, that (*viz.*) my said Stone of a Coal, or my red Carbuncle, if it be dissolved in the air, it yields a green fiery Liquor, which if smeared upon any Silver it gilds it as Sulphur does. If the Divine Clemency shall supply me with life and strength and that my enemies, and opportunity shall permit, I will some time or other set about the work of fixation, that so it may appear what is thence to be hoped for.

And now friendly Reader who art not addicted to either party tell me, whether or no there does not redound unto thee more light from this most brief treating of the Carbuncle, than from the obscure *Lucerna* or Candle of I. H. S. in whose Book there are indeed the names of a many Authors cited, but none of their Writings are explained, and therefore it is rather a bringing others into a Labyrinth, than a showing of the true way.

Paracelsus adds, that this Carbuncle is hid in a little Chest made of Gold and Gems, this Chest in a Golden Coffin (or Tomb), this in a Silver one, and finally this Silvery one in a Tin one; which sayings verily are to be taken or understood in a far other sence than they are uttered, as well as the words foregoing: For to what end should there be such a multitude and variety of Coffins? My opinion hereabouts is this: Forasmuch as there lies in Tin (as *Paracelsus* testifies in his Book of *Vexations*, when he saith, that *Jupiter*

has much Gold in it, and not a little Silver) a spiritual Gold and Silver hidden, and that ☽ contains ☉, and ☉ contains Tincture, we are to understand these things of them, they being as so many Coffins.

But some may say, to what use serve the Tin and Silver, if they are to be removed afore we can come to the Golden Coffin, and get to that which contains the Carbuncle, may we not presently even at first dash seek such a stone in ☉, and leave Tin and ☽ untoucht? I could most easily satisfie such an objection, and give a sufficient reason of *Paracelsus* his Writing such things, but that I judge it inconvenient to communicate such things of so great a consideration (or moment) to wicked Zoilists or Carpers.

However I cannot here let this slip, *viz.* that there lies hid in ♃ an excellent Mercurial Liquor, which is thence extractable by the benefit of that Key which lies upon the Sepulchre or Tomb, *viz.* by the benefit of Salt-petre. This mercurial Liquor, loosens the bonds of ☽, and makes it fit, so as to be extracted (or made into the best ☉, out of which the Carbuncle is to be afterwards made, for every (kind of) ☉ doth not at all resemble the nature of a seed, but supplies the place only of an House or covering, which containeth seed in it, and which (covering) must of necessity be removed by him who desires the seed it self.

I have in other places shown how properly the metalline stock or nature may be compared to a Vegetable Apple: *Saturn* is the root of the Tree; *Mars* the Trunk or Body; *Jupiter* the Bark of the Trunk; *Mercury* the Juice contained betwixt the Bark and the Trunk; *Venus* the green Leaves; *Luna* the white Flower or Blossom; *Sol* the Fruit or Apple of the Tree

containing the seed of the Vegetable.

Now then, even as it is a thing evident to all, that the Apple it self is not the seed of the Tree, but the Nut or Kernel is hidden in its inward part, so that the Apple doth only keep or hold in it the seed; even so in like manner ☉ is not at all to be accompted as the seed of Metal, but only as a preserver (and coverer over) of the seed. He now that lights on the true Key, which *Paracelsus* hath put upon the Golden Coffin, (*viz.*) the inside of Salt-nitre, he will be able to open, not only the Tin Coffin, but the Silver and Gold Coffin too, and to take that Coffin thereout of, which contains the Carbuncle and other Gems.

These are the things I was willing to publish according to my opinion, concerning that great Carbuncle lying so deeply hidden in those Coffins: I permit others to expound them otherwise, for I do not offer these things to the old Men who stiffly contend for their own conceptions as it were for the best thing they have, it being an hard matter to tame an old dog; but I present them to such only as are the younger students of the true Hermetick Physick or Medicine, and who are not already drawn into various errors by the reading of many Authors. And he that refuseth to believe that even the greatest *Arcana* may be handled or treated of in a meer simple or plain Stile, and that they need not at all any prolixity, shall never attain his wish'd for end, though he were able to recite by heart even all the Philosophers Books. And thus much may suffice in this place.

Lastly, *Paracelsus* adds at the end of the Prophecy, that the most Great and Blessed GOD will grant to the finder out of these Treasures notable Power and Fortitude, whereby he may oppress all evils, detect

good things, and get every profitable thing, certainly whoever he be that shall find such an universal Treasure, he will labour to suppress every noxious thing, and to disclose (on the other hand) whatsoever is any ways profitable for man-kind, and necessary, and this to the very utmost of his power. For the Philosophers say, *Our Art doth either find a Man honest and godly, or it even makes him such an one*; that is, it is altogether impossible for such an one that lights on such Treasures to be an ungodly Man, so, as for those highly precious gifts of God not to stir him up to godliness and Mercy.

I could render this Prophecy of *Paracelsus* more clear, but that I study to be brief, and could manifestly prove, that it is not to be understood according to the bare Letter, but that *Paracelsus* had regard to this great universal of the Philosophers, which is clearly enough hinted in these words which are mentioned at the end of the said Prophecy, *viz. That all evils may be kept under, (or abolished) and that all good things may be drawn forth or advanced, and withal, all necessary and useful things may be gotten.* These words do openly enough point at the universal Treasure of the Philosophers, by which all evil is kept under, and all good educed, and all necessary and profitable things acquired. On this wise are my Conceptions of them, let another interpret them according as seems him good. For when the Lion shall have found the said mineral Treasure, he will be incited or stirred up to such a great passionate wrath and power, that is able easily to dull the edge of the Eagles Claws, that is, his adversaries. 'Tis impossible for the Eagle to get such a Treasure, but a thing most easie to the Lion; For there is not a subject in all nature that can make the Lion so fiery and powerful as the *magnesia Saturnina* can, and

therefore it easily tames all Corrosives, and cuts off their Claws. Experience confirms the things I here mention, and therefore I will say no more: Yet however I think it expedient to add this one thing more of the nature and properties of the Lion and Eagle.

It is sufficiently manifest, that the Eagle is called the King of all Birds, and the Lion the King of all four-footed Beasts. Not, as if the Eagle were the greatest amongst the Birds, and the Lion the strongest and greatest Animal amongst the Beasts: No, no, There are bigger Birds and Beasts than the Eagle or the Lion; Geese, Swans, and our Country Storks are bigger than an Eagle, (I omit to speak of the other huge Birds in *Asia*, *Africa*, &c. Amongst which the Ostrich is reckoned for one, which is as big almost as a Horse, and runs swifter than a Horse.) Then, for Beasts, there are some of the (like proportionable stature) as the Rhinoceros and Elephant, which fear the Lion no more than the Ostrich and other (great) Birds do the Eagle; yet nevertheless do they acknowledge the Lion and Eagle for King, and that deservedly too, because of the Velocity, strength, valour, and other virtues that those Creatures have.

But yet Historians rank the Griffin and Dragon amongst the Birds and the greatest Animals. They paint (or describe) the Griffin, a winged Animal, one half part resembling a Lion, the other half part an Eagle; the Claws, Wings and Head like an Eagles, the other part of the body like a Lions. But this is a Philosophical and Poetical Fable, by which they would disclose and lay open other Mysteries and Arcana's. For there is never to be found in all this whole compass (of the World) such a Dragon as flies

in the Air or spits out Fire; but all these sayings, point at Salt-petre. They likewise feign the Griffin to be of such power as to be able to carry away through the air an armed Souldier on Horse-back; these and greater things than these can Salt-petre do; for 'tis able to blow up whole Castles and Fortresses with many myriades of Men into the air; and would to God this were not so well known. The Philosophers have only shadowed out their Dragon amongst other Birds. Our Dragon never dies but by the help of his Brother and Sister, that is of the fixt Lion, and corrosive fluid Eagle, the which thing may be likewise said of the Griffins. For of the fixt burning Lion, and fluxil or fluid corrosive Eagle, there is created no other thing but a Griffin, part Eagle and part Lion, which lifts (or blows) up Mountains of most vast weight; when they fight each with the other they kill one another and are raised up again out of the dead Carkass. And thus there are regenerated (or again born) other Lions and other Eagles out of the Griffin, and (if you are so minded) both the Lion and also the Eagle may be fed and fatted with the common Flesh of other Wild Beasts, so as thence forward they may generate innumerable Griffins, which you may use not only in time of War against the Enemies, but also in the Mountains, to dig out Treasures thence, and being digged to carry them into the Nest.

NB. It is reported of the Griffin that he gathers much Gold which he carries with him into his Nest; But all these things are to be understood of the strength and virtues of Salt-petre; concerning which I could be much more prolix and more clear were I not even constrained to over-pass it and let it alone because of the ungodly crew of wicked men.

And now let us enter with the Philosopher *Virgil*, into the dark Cave or Den of the *Sybill*, and let us see whether or no we can find the Book there (that is Salt-petre) wherein are found all the secrets of nature: Or rather, let us enter into the Stable with the three wise Men or Kings that came from the East, and let us there seek the Son that was born of a Virgin, who is the King of the World & the King of all Kings, and let us apparel or adorn him with due gifts or presents, that his age & strength may grow up and be augmented, & he may at length drive away the Diseases of his three brethren, *viz.* of the Vegetable, Animal, and Mineral. This Infant needs not Gold, Myrrh, and Franckincense for his sustentation, but we will bestow upon him instead of Gold, Myrrh, and Franckincense, three other things for multiplications sake; common Sulphur shall supply the room of Gold; common Salt, of Myrrh; the external green boughs of Firr or Elder, of Franckincense; thereof will we make his Bed, and these shall be his coverings.

The Salt which is animated by the Sulphur and converted into Milk shall be his food, so long until he becomes great and strong enough, yea a Potent Monarch, and then will he gainfully reward his Tutor (or Guardian) *Joseph*, for his laborious Wardship.

The Magi and Philosophers observed the Star of our Infant, which shineth so brightly as that it dazles the sight of the beholder; nor can any one look long upon it without hurting his sight, and thereupon it is worthily called the Son of the ☉: For there is not any clear or bright light without the Sun, the Country fellows therefore do not perceive such a light, but the Chymists can (whensoever pleaseth them) make and see such a light.

The things which I here declare concerning the nativity of Salt-petre, are most easie to be understood. It is generated or born in the Stables, The ☉ is its Father, the ☽ is its Mother, the Wind conveys the Paternal seed in a spiritual manner, into the moist Earth of the Stable, by which, the Virgin Earth being impregnated doth after due time produce its young to light.

NB. That Earth which produceth and conserves Herbs, Grass, and Metals is called the Mother; and that Earth which doth not produce (as in Stables, &c.) is as yet to be accompted as a Virgin, which doth afterwards yield so noble an offspring. No Earth out of which, Herbs, Trees, and Minerals are born doth ever conceive again, or ever intermits the production of such things, and for that reason is it called the Mother of all things. But now that Earth that is found in Stables, which conceives neither the *Solar* nor *Lunar* beams, nor is moistned with either Rain or Dew, cannot produce any thing, unless the beams are conveyed thereinto from the Sun by the Air, then the impregnated Virgin in the Stables, brings forth an offspring, which is by the Philosophers presented for its sustentation, with a threefold kind of gifts; to wit, Sulphur instead of Gold, and that being in like manner fixt and most pure; with Salt instead of Myrrh, which is pure and preservative, and with the Juice or Resin of the Firr-tree, or Elder, instead of sweet smelling Franckincense. These three things are the Aliment or food of the new Infant; The Green Boughs of the Firr or Elder, do furnish him with a Bed for his Cradle; The Sulphur and Salt yield him sweet milk to nourish him; so that there needs not any thing else but a good overseer, *Joseph*, that may keep off the Rain and the cold Air from this Infants Bed.

By such a means as this may we nourish our most tender Infant and advance him to his Kingly Monarchy; when he shall arrive thither he can make all his Brethren sound and rich: For the Vegetables do only desire profitable and convenient food, or some fat earth, whereby they (being well and sound) may attain to their perfection and encrease themselves; which thing Salt-petre does better than any other.

Nor do the Minerals desire ought else but that the impurity and superfluous Sulphur be taken away from them, that so they may (after a perfect Purification) cast forth their seed, that is Gold; and this, Salt-petre does most perfectly. Then Lastly, the Animals seek not after other food than what the Earth supplies them withal, which to effect, Salt-petre must of necessity be at hand.

Salt-petre therefore is the only preserver of all Vegetables Minerals and Animals, but the soul of Man doth not at all belong thereunto, for it is the propriety of Jesus Christ; but as for the bodies, Salt-petre is the most profitable medicament. Whatsoever I have here produced in this place, I have already Written the same in other places of my Treatises, in another kind of manner and expression, and therefore I suppose it to be plainly needless to make any farther addition: He that will not be able to light his dark Candle at this shining light, will be blind all his life time, and consequently incurable.

As concerning the preparation of Sulphur with Salt, how it is to be made a *Lac Virginis* I have already mentioned it abundantly in many places. And as for the making of the Cradle or Bed, and what form 'tis of I shewed about the beginning of this Work: So that now there remains nothing behind but

the applying the hands to the work, if we desire to get honour and goods from (this) principal Monarch.

Salt-petre is the only Artificer to reduce Metals unto their first matter, or of making them Astral. For the Stars are nothing else but pure fire. They exercise fiery Operations, and produce fiery things; like as the Vegetables do putrefy by the Salt-petre in the Dung, and are reduced unto perfection and multiplication, without which putrefying there can never be made any multiplication of the Vegetables, as Christ himself witnesseth; if the Wheat does (not) putrefy in the Earth it can produce no fruits. The like is in the Animals too, yet especially in the Eggs of Birds, which said Eggs must stink and rot afore the hatching of the Chicken comes. Therefore in vain have many tried so to defile (or putrefy) Metals and reduce them to their first matter. Now though the Philosophers tell us that Metals are to be first putrefied afore they can be multiplied, yet they meant not such a putrefaction, but the putrefaction of Metals must be done by the help of fire, and withal must be so effected by Artificers, here below, as the Metals are wrought by the Stars in the Heaven, for we must imitate Nature. And forasmuch as nature generates all Metals by a Celestial Fire, therefore the Artist must go no other way, but must imitate nature if he would do any good on't.

As for Vegetables and Animals, we willingly allow them a moist putrefaction, but for the Metals, a dry and fiery putrefaction suits with them, and which may be perfected in two or three hours space, as may be seen in my *Continuation of Miraculum Mundi*, and in (my) *Testimony of the Truth*, [or *Explication of Miraculum Mundi*:] And this is the only cause (or rock) against which many have fallen, and so have

not gotten any good thing, (or profitable.) Now, afore putrefaction it cannot be enceased; and every thing which induceth a putrefaction into other things must of necessity consist of two contraries in its nature: Water poured upon Water remains Water, and there is no change wrought; but from Fire and Water do many wonderful things proceed. If we pour the corrosive Spirit of Nitre, of Salt or Vitriol upon another corrosive Spirit, they easily embrace each other and are commixt without noise, and there is not thence generated any new thing, but it always remains an acid corrosive Spirit. If we put one strong Lixivium to another like Lixivium, there is no noise (or hissing) stirred up, nor any change made; but now if we mix that same Lixivium with a corrosive Spirit the one operates upon the other, being both contraries, and there is generated of them both somewhat of a middle nature, which has not the likeness of either. This now is clearly evident in strong fixt Nitre, or any other Lixivium of Wood, when it is poured into *Aqua-fortis*, and they act one upon the other; then of them both, there proceeded a certain middle thing, *viz.* burning Salt-petre, which brings all things to putrefaction, and promotes or advanceth their multiplication, the which thing is after a sort known in the Vegetables, and Animals; but as for the Metals, the Philosophers have accompted it as a secret even to this very day; and therefore hence comes it to pass that there hath been so much erring in putrefaction (which is the very key of the Art) and nothing hath hitherto been brought unto the wish'd for end.

Forasmuch therefore as Metals ought to be putrefied by the Fire, we do not find any thing more commodious than Salt-petre, which in one hours space, putrefieth all the Metals prepared aforehand,

and multiplies them, *viz.* when a commodious and moist Matrix is put into the Fire, wherein (a man) may put his (metalline) seed to be therein multiplied; for seed is not multiplied without a Matrix, and this is daily observable in the Vegetables and Animals.

Now, as a Vegetable seed needeth for its multiplication a fat and moist Earth, and an Animal Matrix; so likewise the seed of Metals needs a metalline Matrix, without which it cannot be multiplied: And by how much the more apt and commodious the Matrix is, so much the more noble is the Fruit, and so on the contrary.

So then, by this time all men know that by how much the stronger and better the contraries be, so much the better are the fruits, as hath been already said. The stronger the *Aqua-fortis* is, and the more fixt the Salt or Lee is, that are mixt together, the better and the more plenty of Salt-petre is there generated. But especially if we concentrate corrosive Spirits by Metals & do make them (thereby) yet more corrosive, as also if we concentrate fixt Salts by Flints, and so make them yet more fiery, they do then perform many wonderful Operations. For whereas the bare contraries do yield but only Salts; being concentrated, they do yield forth fruits that break out as if it were Trees: Concerning which you may see in the second part of the Furnaces, about the Liquor of Flints. This is that which we see and believe, *viz.* that by how much the more the contraries are contrary to each other, so much the greater product is there of Fruits. But because Fire and Water are naturally exceeding contrary to each other, therefore do they also produce the greater fruits, *viz.* Metals, which are greater than either the Vegetables or Animals are.

NB. If the Artist can think upon a yet hotter Fire than the common Fire is, and a colder Water (than usual) and know where to find them, such will of necessity likewise produce Metals that are more excellent than the Vulgar.

But seeing that amongst all the fires there is not given a hotter than Salt-petre, a cold wife is to be associated unto him, and the wedding is to be celebrated in Hell, then will both of them leave (behind them) Sons of Riches and Health.

'Tis an usual custom throughout all *Germany*, haply other Kingdoms have the like, that when two contract Matrimony, the Bridgroom and the Bride, are led into the bathes two or three days afore the Wedding is Celebrated, and they are there wash'd, to the end that they may be the more acceptable to each other: And although they put on their best apparel and do adorn themselves with most clean dressings, yet do they at last put off all their fine Ornaments when they desire to conjoin themselves and multiply.

The same is here to be understood of the new metallick multiplication: If each party be but only sound & of a good constitution (though the outward raiment be vile) yet are they able to beget as fair Children, as Royal Persons, (who are loaden with Gold, Silver, precious Stones, and Pearls,) can. Hence it is apparent, that the Garments contribute nothing to the business, but that the multiplication doth solely depend upon the soundness and good constitution of the bodies; and this *Pythagoras* well knew, and willingly left it to posterity, for he observed that the soul of the Metals being by Art forced out of the body did presently pass into the nighest bodies and after their death, again into the

next: Hence it was, that he fell into a great errour, when he concluded, that the same was also true as to the transmigration of the soul of man, and the order therein the same; to wit, that the soul of one man did not presently pass into another man, but as well into Sheep, Birds, Fishes, *&c.* And for that reason, his successours, (a great part of whom inhabit *Africk*) will not to this day kill so much as a little Worm, fearing least that they should kill such an Animal, as contains in it the soul of their Father or Mother. Besides too, he signified that the soul of a man was better and more pleasant in Frogs than in the most Potent King. Without doubt this errour arose from hence, *viz.* his seeing the souls of Metals that are forced out of their bodies, to occupy or possess the nearest and more commodious subjects. By how much the purer the Subject is that the soul of Metals finds or lights on in its departure (or going off from the Metals) the willinglier doth it possess it. We Christians have a more perfect knowledge of the soul given us than was given *Pythagoras*, but if we speak of Metals, then this saying of *Pythagoras* hath good foundation, which thing, no experienced Philosopher will ever be able to gain-say or confute with truth. This we know most certainly, that God doth esteem the soul of a beggar as much as of a King; the bodies do indeed make the difference for some bodies are better adorned than other some. Likewise, the noble and not adulterated Alchimy teacheth us that the soul of ♂ or ♀ is as good as the soul of ☉ is; herein is the difference between them, that their bodies are bigger and stronger, and so their noble soul is contemned and rejected by the ignorant, because of the rude grossness of their bodies. Hereupon, the curious searchers of nature have laboured to destroy those gross bodies, and to draw out their pure soul,

that they might translate it into better and purer bodies, (the which thing also succeeded according to their desire) and by the extracted souls they transmuted the imperfect and impure bodies of the Metals into most pure Gold: Nor were they ignorant of the Artifice of particularly purifying the gross and impure bodies of the Metals, like as the sick bodies of men being purified by the virtue and help of medicaments are restored to their former health and vigour. For when an impure Patient meets with an expert Physician whom he (*viz.* the Physician) undertakes to cure, he doth first of all (if his Patient haps to have the *Itch*, *Scabs*, the *Scurvy*, *Lues Venerea*, *Pustules* and other stinking sores) prescribe him a purge whereby all the impurities may be first expelled. Then he permits the sick person to use a sweating-house, or stove, in which he may sweat so much as to be very much debilitated by the heat. Lastly, he brings him into a Parlour or Chamber that has a pure air in it, to refresh him, and therein he manageth the cure of him, until he hath recovered his former health and purity; and if the sick be not made clean or pure by the first purgation and sweating, he reiterates the same remedies as often as need shall require, and till the sick be perfectly freed from impurities.

Just so, doth the skilful Chymist proceed in the purification of the imperfect Metals, for he expels all the excrements which they are in an especial manner endued (or soil'd) withal, *viz.* the impure and stinking Sulphur by the help of the fire, and by the help of little appropriated stoves (or pots) even until they get their due purity; Art therefore imitates Art. But if so be that all Physicians were skill'd in Alchimy and Astronomy we should not need such plenty of Coffins, for in them (*viz.* Alchimy and

Astronomy) one true Art doth continually produce out of it self another.

The Astronomer when he would give a man his judgment as to the manner and term of his life, doth first of all look to the hour of the nativity, and fisheth out what condition that aspect is of, that doth at that time bear chief rule in the Firmament, which when he hath found out he doth by the means of calculation, predict what good or what evil things will befal the Child (or party) whilest he lives.

Although these prognostications are not at all Infallible, yet are they not therefore by any means to be totally rejected. For we oftentimes find many things true by experience which otherwise we would not credit: Nor is it so much without reason that we so esteem them, but this ought not to be done compulsively (or, as if they forced us) for 'tis the usual Proverb, *The Stars incline, but do not necessitate*. For like as a man that is born under an evil aspect may by doctrine and information be made good, so that here the aspects may be of no moment; so on the other hand, we often find that such an one as is born under a most excellent aspect is corrupted and depraved by his conversation with evil men. And these very things doth even Alchimy demonstrate the truth of: For even as soon as ever the Infant is born & begins to suck in the air, he doth even then attract such influences (according to the opinion of Astronomers) as the Stars do that very hour emit from themselves upon the inferiour bodies (or things here below,) and so consequently he imitates the nature of these: Even so the new born Metallick Infant, doth in the moment of his birth attract a metallick Astrum or Constellation, like to that which did at that time bear the chief sway, and so

consequently receiveth qualities like the qualities of this Star or Astrum. And although that the metallick Infant were made a partaker of a good Star (or aspect) the first time of its nativity, yet notwithstanding it may be accidentally infected afterwards, so as thence to become an evil Metal: And on the other hand, that which was bad at the first may be reduced to that pass by Art and a convenient discipline of the fire, as that the best Metal may thencefrom proceed, and this, experience witnesseth every day, nor can it be denied by any but such from whom the light of nature lies hidden.

If now the superior Stars can exercise such great virtues, what hinders but that the inferiour ones may exercise the same if not greater, provided we but rightly govern and tame them. The superiour Stars are not at all subject unto our power, they are submitted or put under God's guidance only. But the inferiour ones may be handled by us according to our pleasure. The Physician may apply them to Medicine, the Chymist may apply them to Alchimy. He then to whom the knowledge of using the inferiour Astrums aright, is granted, may use them with most great honour, and eminent benefit, whether he be a Physician or a Chymist, which (said Astrums) others are constrained to leave untouch'd to their great disgrace and loss. But men now adays are too much given to laziness and sloath, so that there are but few to be found that will search after nature's Secrets. A many there are that challenge to themselves the title of learned Philosophers and yet are altogether ignorant of the foundations of true Philosophy. There is not in this age scarce any esteem at all, of true Philosophers, though notwithstanding they deal with us so sincerely and do clearly set afore our Eyes, the interiours of nature,

and leave us excellent Writings. So *Pythagoras* whom we mentioned afore did upon this accompt suppose, that, (because he saw the souls of Metals to be carried out of one body into another, and to Operate as well in this body as in the other former, and consequently to animate this, and make it more perfect,) the case was the very same with the human soul, and by this means he directed as it were his successours to the universal and particular work of Metals.

And even just after the same manner hath *Virgil* done, when he would that his Carcass should be cut into pieces, and be reduced unto a Life by a continual instillation (or dropping in) of burning Oil. Perhaps the occasion of his falling into those cogitations was this, either because he observed that the dead metallick bodies were by the operation of the Fire, and addition again animated, and so he perswaded himself that the like might possibly be done in man; or that well knowing the impossibility of doing this thing he would give an occasion to such as came after, more curiously to search, and so was willing to point out with his Fingers as it were at the multiplication and propogation of the metallick bodies (as *Pythagoras*, of the souls.)

Most certain it is, that it will not be any difficulty to him that knows Nitre aright, and can so order it as to operate in metalline bodies in the form of fire, to multiply *Sol* (in an universal way) and to make the viler Metals more perfect (in a particular way.) And this I was willing here to add. 'Tis well for him that useth the gifts granted him by God, to his glory and the benefit his neighbour.

And thus much may suffice to have been spoken in this place concerning the nativity and multiplication

of Salt-petre, and the Potent Monarchy; more shall be spoken upon some other occasion if God please.

Now follows the use and benefit of Salt-petre.

Having thus shown the Generation of Salt-petre out of every Kingdom, *viz.* of the Vegetable, Animal, and Mineral Kingdom; it now remains yet, briefly to shew what wonderful things the same doth effect in Medicine and Alchimy, which thing we do not find that ever any one of the Philosophers did perform, but kept all to themselves for secrets.

Forasmuch therefore as I have made a beginning of the thing already in the second part of this Book, where I spake of a certain moist separation; that is, I there delivered that it is possible to extract Gold and Silver out of all (yea even the most vile) Metals, by the benefit of a nitrous Water, so as that any one that will but set his hand to the work may thence get his sustenance most plentifully; it seems a thing necessary to finish what hath been already well begun.

Now forasmuch as I did in that place let pass the describing the manner it self of Extraction, a many Friends have much desired an illustration of the things there spoken, but I could not hitherto by any means satisfie their petition, because that the abundance of my imployments denied me the time of Writing.

Now therefore I have determined both to gratifie these and others by opening this most noble artifice, but yet so, as that I will reserve some things unto my self, that so all things may not be made so common to my Enemies. And if so be that any of my Friends desire a more plain explication, and desire an addion

of the things I have omitted here, it will be an easie matter unto me to satisfie their requests.

This Art therefore doth not only conduce to this, *viz.* to extract fixt Gold and Silver out of all sand, earth, stones, yea and out of the more vile Metals (or Ores of Gold and Silver; (but also to extract the volatile and immature Gold, and Silver, and to make it fix, and that in such a compendious manner as that it will be a matter of (in a manner) no costs or labour: Nay more, if so be there cannot be had any poor Metals, Stones, or such like subjects that contain in them Gold and Silver (though even these are plentifully enough to be had in every part of the World): Yet nevertheless may that Art be exercised with profit, about even the imperfect Metals such as ♂, ♀, ♃, ♄, ☿, *Calmei*, *Zink*, *Bismuth*, *Cadmia*, *Arsenick*, *Auripigment*, *Granates*, *Talk*, *Smiris*, *Hematitis*, and such kind of Fossiles, are; and which contain ☉ & ☽, partly fixt, and partly volatile, and may be commodiously extracted by the help of a nitrous Water.

Besides too, most excellent Gold may be in like manner profitably separated out of all such things as are made by Art of Silver, whether they be gilded with Gold, or not, insomuch, that if there be but a most few grains contained in a large portion of Silver, they may be separated with gain. And if so be any be so minded to impregnate the separated ☽ again with Gold, that so it may again yield Gold by a following separation, he may most easily do so; yea, this operation may be so often repeated after this wise until all the ☽ pass (by Graduation) into *Sol*, which thing may be compared to a perpetual durable Mine-pit of Gold, and is perfected by the benefit of Salt-petre only; and therefore it both may and ought

to be called and that deservedly a Store-house and comfort for mankind. For when we prepare that Salt-petre of medicinal Subjects, all the Salt-petre doth not put on the form of christals, but much of it abides permixt with the water, which water doth abound with a most notable nitrous virtue of thoroughly promoting Christallization, insomuch that the seeds of Rye, Wheat, Millet, Oates, Beech-wheat, and such like, when they are macerated or steeped therein some due time, afore they are sown in the Earth, do multiply themselves extraordinarily, so that we see 3, 4, 6, yea and sometimes 20 plants spring forth out of one single Grain.

With the same nitrous Liquor too, (so it be prepared of true medicinal things, may be made a most excellent Medicine (which may be in a manner compared with potable Gold, and by the help of which, great diseases and as it were incurable, are happily healed) and that in a few hours space.

Forasmuch therefore, as such a Kingly medicament (of which I have made some mention in the Second Part of my *Pharmacopœia Spagyrica*, where I treated of nitre) & such a most excellent & incomparable dunging of the Ground, may, together with the Salt-petre, be prepared & instituted; so most easily & almost without cost, (on which depends the health of the body, and fertility of the Ground, whether you respect Corn, or Wine, or Hops, or any other things, that man useth instead of Meat and Drink for the sustaining of Life; or else the extraction of ☉ and ☽ out of all the most abject Subjects every where found) may we not justly pronounce thus much of Salt-petre, that it is altogether profitable and commodious to all men; and therefore well worth the searching after, and the application to the use of

Man.

Therefore like as by the help of Salt-petre, we see we are able to get all such things as an honest man seems to need, such as are Food, Drink, Health, yea and ☉ and ☽ too, and all this most plentifully and perfectly: so on the contrary, the use of this Salt-petre is very hurtful when it is used for evil, and this is sufficiently seen in the time of War. Yet nevertheless we should not esteem less of it than it really is, because of its being abused, but rather the benefits attending it (which are very many) should stir up our minds to make a diligent enquiry into it. The end of the World is at hand, and sundry things are detected, which the ancients reserved amongst the highest Secrets, but they are but little esteemed; some of them, I will here exhibit and show unto you.

Now follows the Process, Operation, or Manner of extracting Sol *and* Luna *out of all the Metals with Profit.*

That you may gainfully extract ☽ out of the Metal (or Mineral) of Silver, Litharge, stones, and the like fossiles, which have ☽ in them, First of all you must commit them to the fire, that they may be made red hot (but yet this needs not be done with sand) then powder them, and put them in a Glass Cucurbite, pour thereupon as much *Aqua-fortis* as is sufficient, put this Cucurbite in a pan full of sand, and then heat the sand by little and little by putting Fire thereunder; that so the *Aqua-fortis* may by the help thereof attract the ☽ out of the powder; then pour off the *Aqua-fortis* from this powder, and pour it upon the other like conditioned powder, that it may also extract the ☽ out of that too, and this decanting and pouring on, must be repeated so often until there be

no more dissolved.

The *Aqua-fortis* is always diminished or wasted because some of it adheres to the Metal, and therefore must there always be other *Aqua-fortis* put in the room of that which is wasted; The *Aqua-fortis* which adheres to the Metal is to be thence separated by the benefit of boiling, on this wise; Pour common Rain-water upon the Metal contained in the Cucurbite, and mix it well by strong shaking of the Glass, then heat the sand so as to make it boil, and so that hot water will draw to it self the *Aqua-fortis* out of the Metal, which said water contains ☽ in it. Then when this water is abstracted by inclination or pouring off, put on some Rain-water a second time upon the powdered Metal remaining in the Cucurbite, and this will extract that which the former water left of the *Aqua-fortis* partaking of ☽ (unwash'd off:) and so let nothing of the ☽ remain in that metallick powder; when it's thus done the matter is to be thrown away as altogether unprofitable, unless there lies hid therein any Gold; which if it be so, we must pour some *Aqua-Regia* thereupon, and order the operation according to the foregoing method; then mix both the strong waters together, both that which extracted the ☽ and that which extracted the ☉, mix them diligently, and there will thence arise a certain white Water, and the solution will be like Milk; For the ☽ cannot abide the *Aqua-Regia*, but there will precipitate a white powder which snatcheth (or precipitateth) down with it self out of the Waters the Gold too. We may make use of the decanted Water to extract ☉ out of the other Metals; for the pouring on of the *Aqua-fortis* with the ☽ in it, to the *Aqua-Regia*, doth not at all take away ought of the virtues.

Upon the precipitated powder of ☉ and ☽ hot

Rain-water is to be several times poured, that so all the sharpness of the *Aqua-fortis* may be extracted. The powder of the ☽ is to be put upon some Cap-paper and dried. And as for the way of separating the ☽ from the ☉ we will presently teach in what follows.

The edulcorating waters as well of ☉ as of ☽, are to be all of them mixt together, and then the ☽ will settle to the bottom, and attracts the ☉ which was in the other water (or washings): so that there remains not any either ☉ or ☽ in the edulcorating Water (or washings): nor are these waters of any farther profit as to the work of separating as afore, yet notwithstanding there may be made excellent Salt-petre of them, as we shall mention in what follows.

When you have rightly edulcorated and dried the precipitates of ☉ and ☽, they are to be put into a strong Crucible, this Crucible is to be placed in a Gentle fire, until the matter therein contained doth flow, which is easily done, for it is very fluxile; as soon as ever you perceive it flow, turn it out, for fear least any of it should penetrate the Crucible, and so bring damage or loss to the Operator. When the ☽ is poured forth, you will find the ☉ sticking to the sides and bottom of the Crucible like pale Gold, altogether Crude and not at all fluxile. The ☽ turn'd out is brittle, fusile, and volatile, and is by the Chymists call'd Horny-Luna, but I call it the ☿ of ☽, it being of excellent use in Alchimy, as shall be shown in what follows.

The Crucible in which that ☉ remained may be kept to melt such like precipitates of ☉ & ☽ in again; when this hath been done pretty often (in the same pot) melt down this ☉ by adding a little borax, and you shall receive a palish Gold, because in this first

melting, some of the ☽ doth adhere thereunto.

This now is the common way of separating these precipitates of ☉ and ☽ from each other, there shall follow a better way in what ensues.

NB. That if so be, both the Metals are boiled in a strong Lixivium after their edulcoration; or if some fixt Salt made of a Lixivium, be powdered and permixt with it afore melting, then the ☉ and ☽ are reduced together, and may be afterwards separated by the help of *Aqua-fortis*: There is yet a more accurate way; (and it is this) when we mix the edulcorated Calxes of *Luna* and *Sol* with (A.) and being mixt put them in a coated Retort, and put fire thereunder by degrees (as is wont to be done in destilling) and keep it for 6 or 8 hours in a continual Cementation; and so the volatile ☿ of ☽ is made fixt by the help of (A.) and corporeal: Yea and tingeth some part of the added (A.) so that by the benefit of this Cementation, the ☽ is made more Golden. This Cement is to be most finely powdered and to be reduced by the following melting: and you will find your ☉ and ☽ augmented. The melting is thus; Take of the best Salt-petre, and (A.) each alike: mix them, and separate the Spirit of Nitre by a Retort, which (Spirit) is much fitter for separation than simple *Aqua-fortis*: The *Caput Mortuum* remaining behind in the Retort, is to be powdered, the fixt Nitre is to be extracted with Rain-water out of the powder. This Lixivium or extracting Liquor will be of a green colour which is to be coagulated into a Salt by a due boiling; which Salt is able to reduce the ☿ of ☽; and to make aureous or Golden, yea, and to reduce the Cemented ☿ (of ☽) too.

NB. It is better to mix the fixt Salt-petre, or the Green Lyon simply with the horny ☽, to cement it in

a Retort, than (to take it) out of the Retort, (and) reduce it with a stronger fire; and so we shall have an excellent augmentation of ☉.

NB. The *Mercury* of *Luna* cemented with (A) may be likewise reduced by this means, (*viz.* with this flux) that we take one part of Flints that will melt in the fire, and of the fixt salt of ashes four or five parts, and so mix them together, and melt them into a white glass; 'tis able to reduce the best Cements. And this is the best way of all of reduction.

Besides, all those ways of reducing a Cement, there may even this way too be instituted, and that not unprofitably. Take of the fusile Glass of Lead four parts, of the cementing Powder one part; melt them in an iron Crucible in a strong Fire, and some of the Lead will be reduced out of the Glass of Lead, and will be near (or partake of) ☽: This Lead is to be blown off on the Test, and you shall find an aureous ☽: But for as much as the Lead separated from the Glass of Lead in the iron Crucible, contracts a blackish colour from the Iron; it is profitable to add to the matter in the filling or melting, some Salt of Ashes, as being that by which the Lead becomes depurated, and so is easily separated on the Test.

But if so be, that (for this work) the Metals (of Minerals) of ☉ & ☽ cannot be had to precipitate the *Mercury* of ☽ out of them, (then) the artificially-made (vessels or plate) whether simply Silver, or else guilt with ☉, may be made use of; let these be dissolved with the *Aq. For.* left after the precipitation, & precipitated with Salt water or *Aqua Regia*, and be edulcorated and mixt with (A) and be fixt in a Retort. Now this Operation is to be done in a Retort, that so the precipitated ☽ that is altogether volatile, may not be wasted, which in a Crucible evaporates

away, a good part of it, which cannot be so done in a Retort; for in a Retort, that which flies up, sticks in the Neck, and may be separated thencefrom, and be mixt with other Cements: And besides too, the Cement is easilyer separated from the Glass, than from an uneven Crucible; for some part always sticks thereon, and cannot be gotten off.

When you are minded to purifie this Cement sooner (or more speedily) it may be molten with an equal weight of Antimony, and there will arise from your golden ☽ a Regulus, which must be purified with Salt-petre. Concerning which work of Reduction, and which is far easier than that which is done by the help of the Glass of Lead, I have most clearly and fully handled it, in my Testimony of the Truth, or the Explication of my *Miraculum Mundi*. By this means every ☿ of ☽ may be rendred aureous, and that as oft as one will, yea, even until all the ☽ be changed into Gold by Cementation and Gradation. Now if you would otherwise separate ought of the aureous or golden ☽, or extract the Metals (where nevertheless you would reduce the separated ☉ and ☽) it may be effected by this means most commodiously and most gainfully of all, because the Calx of ☽ is made aureous by Cementation. This labour yields a continual augmentation of ☉, by which we may live very well and plentifully.

Another Augment or Encrease of Sol.

Dissolve ☽ or ♄ in *Aqua Fortis*, also ♃ in *Aqua Regia*: (NB. Let there be always thrice as much Silver as Tin;) mix the solutions very accurately, and when you see that all the matter is fallen down (or precipitated) to the bottom; pour off the water, which said water will very commodiously serve

instead of *Aqua Regia*, to dissolve other ♃ in. NB. If your *Aqua Regia* be not strong enough, it will not at all dissolve the Tin, therefore in such a Case, you may pour on the Tin, *Aqua Fortis* mixt with simple water, which after they have a while acted upon each other, there must be some salt-water poured thereupon, that so the ☽ or ♄ may be precipitated to the bottom of the Vessel, in which (Vessel) the white ashes of the Tin ly. This matter lying in the bottom, is to be edulcorated, dryed, and reduced by a strong fire, by which operation you have not only an augmentation of your *Luna*, but it is likewise made golden.

NB. This business may also be thus managed, First, dissolve ♄ or ☽ in *Aqua Fortis*; to the solution add an equal quantity of Rain-water, pour this mixture upon ♃, and let the solution be made in a pretty warm place with sand; separate that which is dissolved, the matter that is yet somewhat harder, by decanting or pouring it off; then make the precipitation with salt-water, edulcorate it, dry it, and melt it, and you shall have Encrease.

But if this Mass will not so easily melt, then powder it, and mix it either with Antimony, Glass of Lead, or with a fluxing matter made of salt of ashes and flints, that thereby it may be made fluxile or meltable: That which is made fusile by the help of the Glass of Flints, is presently pure; so is not that which is done by the help of the Glass of Lead, for that must be hence separated, and be (by the benefit of ♁ and ♂) reduced into Reguluses, and be purified and washed by Salt-petre. Therefore it is the better way to promote the melting, with the Glass of Flints than with Antimony, because the ☽ may be afterwards separated without Loss, which is not so

easie a thing for every one to do (otherwise.)

The Reduction which is made by the help of the Glass of Lead, is indeed (otherwise) a most easy way, but by that way which is done with Antimony, we get more ☉ than by any other way.

Another way of Augmenting Sol.

Take the golden Talck, Granates, Smiris, Hematitis, the aureous Scoria's of Copper, the greenish, reddish, golden Flint, Sand, or Clay; extract their volatile Gold with a strong *Aqua Regia*; pour into the solution, a solution of Lead made by *Aqua Fortis*; mix it well; when the matter is settled, separate the *Aqua Fortis* by inclination; edulcorate the said Calx of ♄ with water, and dry it, and so have we gotten the volatile Gold extracted out of the *Aqua Regia* by the ♄: This volatile Gold is made fixt on this wise. Take the most subtle Powder of ☉, or its most thin Leaves, add thereto thrice as much of this ☿ of ♄; or four times as much, or six times, according to the quantity of it, by which we formerly got (or fish'd out) the volatile Gold: Set it in such a place where it may have a gentler heat, so as that the ♀ of ♄ may just flow, and not fume; the matter is to be thus kept in this heat for some hours, or rather days, that so the filings of ☉ or its thin Leaves may by little and little attract the volatile Gold out of the ☿ of ♄, and consequently be therewithal augmented.

NB. But seeing it is a most difficult thing to keep such a very temperate heat as that nothing at all of the ☿ shall fly away, and the ☉ shall not melt in the Crucible: It is better to put the ☉ mixt with the ☿ of ♄ in a coated Retort, and set it at a strong Fire for a season for so nothing of the ☿ of ♄ flies away, or

penetrates the Crucible. That which ascends up to the Neck of the Retort may be separated, and be kept for common ☿ of ♄, out of which may be prepared a most excellent Medicine.

Another Augmentation of Sol.

Take of red Arsenick, Auripigment, *Hungarian* Antimony or Cinnabar one part, of ☿ of ♄ three parts, and some thin Plates of Gold; let them stand in a Glass Retort in a pretty hot place, and so the ☉ will attract the volatile Gold out of the added Minerals, and will thereby augment it self. And if so be that there be any thing sublimed up to the neck of the Retort it may be taken thencefrom, and be reduced to a kind of Tincture. And so we may here have a particular augmentation of ☉, and a matter whereout of a Tincture may be prepared.

NB. The vessel that is most fit for the fixation of the Tincture, is such an one as is made of fixt ♄.

NB. The ☿ of ♄ or ☽ may be reduced by a secret fusion (or fusile matter) whereby it presently yields an aureous ☽ or ♄: but especially this ☿ of ☽ or ♄, by the help of which, there hath bin a fixt or volatile Gold extracted out of the earth, stones, sand, and such like Minerals, is to be on this wise reduced, whereby we may receive (and get) as well the volatile Gold as the fixt.

Likewise too, the ☿ of ☽ or ♄ may be artificially distilled, purified, and prepared for a singular Medicament; But yet let no body perswade himself that such a distillation is to be perfected after the common way with retorts or cucurbites, for it is a meerly vain thing to hope for the separation of the pure from the impure that kind of way, for because

the fire forceth up the good and bad alike, the which thing is not at all so done by my more secret Philosophical distillation; for by it, the most pure soul only of the Metal is driven up; as for the terrestreity that remains, it is separated of it self by that more impure (thing) to which it is conjoined, and makes a dirtyish slime. The purer part will be found (by the help of the Cementatory Copple) to contain both ☉ and ☽; as well the purer part of that which is prepared by it self of this (bare) ☿ of ☽ and ♄: as that which is prepared of such (a ☿,) as by whose help fixt and volatile Gold hath been educed (or gotten) out of the nitrous Water; which way also is a most compendious one, of reducing the (extracted) volatile and fixt Gold. For when we reduce this ☿ of ☽ or ♄ by the help of fusing things, some part of the ☉ may easily perish and evaporate: But now here, nothing at all perisheth: For that which does not remain (behind) in the said artificial distillation, and so separate it self from impurities, goes out (or passeth over) and yields a most excellent Medicament more excellent than ☉ it self, which you are well to observe.

Besides too, it is a thing most easie to be done to fix the soul of ☽ or ♄ (that is carried [or forced] up, together with the volatile Spirit,) in the said instrument with ☉; which to effect, there (otherwise) needs a longer time. Therefore even by this one only process is both made a most excellent Medicament, and withal, ☉ is gotten too. These things we have here exposed in very few and plain Words most agreeable to the truth, and do most exactly answer to experience; nor is there any reason of blaming me because of my speaking somewhat obscurely, seeing it is evident that not one of my Predecessors did ever exhibit (or publish) any of those things. Well, what

shall I say? Excellent Gold may be extracted out of all the kinds of Metals, by the help of Salt-petre; yea with so much facility; that it would seem an incredible thing to most Men, though I should clearly set down all the circumstances, word for word: But yet this (extraction is) not (to be done) without the benefit (or help) of ☉ and ☽: For when we have a purpose of augmenting any thing, there must in the first place of necessity be the seed of the thing that is to be augmented, and according to the quality of the seed there must be a fit matrix in which it may take its growth or increase. For example, When we seek for the increasing of any vegetable seed, we prepare a convenient Earth for the same, to which Earth we commit that seed, and so the like sort of Herb buds forth, which doth again produce thousands of seeds; which seeds are again put into the Earth, and so are multiplied even to infinity. This multiplication of Vegetables is sufficiently enough known, and a most easie work it is to multiply a Vegetable, if we have but its seed, and that it be well conserved least it die. So likewise out of one Fire may be made many yea infinite other Fires, for one is always kindled by another. But when all the seed is dead, 'tis an impossible thing to produce a new seed.

Therefore the most Great and Blessed GOD, hath most excellently ordered it, so that the seed of Vegetables may be kept the year about; for if it should not be so, we might well fear the destruction of the chief Herbs in the Winter season, which now (by the benefit of their seeds sowed in the Earth) we are able to produce a new.

Now the progress or order of the seed of Animals is widely different from these, although that even they are committed to such like Animal bodies, as being

their fruitful soil, for multiplication sake: But yet this sowing is done by a vastly different way from that of Vegetables; For we can keep the seed of the Vegetables, and carry it from place to place and so plant or sow it in any part of the Earth we please; which cannot be done with the seed of Animals for we cannot so conserve that, or transport it out of one place into another, or sow it as listeth us our selves. But it must be committed unto the matrix, in that very moment of time that it passeth out, for it cannot be fruitful and entire if it be but a moment of time out of the body. The sowing therefore and conception are performed both together by both bodies, *viz.* by the Male and Female. The cause of this thing is thus, because the seed of the Animals abounds with a volatile, invisible, and living Spirit; which once lost the work of multiplication is wholly taken away. Therefore like as one [Animal] multiplication is perfected so is the other, nor may we by any means transgress the course of nature.

In like manner are the Minerals also multiplied, and by the same manner that it is once perfected by, is it to be always after perfected by.

The Multiplication of the Vegetables and Animals is well enough known to every one, and is every where done, nor (by reason of its being so very common) doth it at all cause in any one an admiration; But the multiplication of the Minerals is not so publick a thing, for there are but a very few that understand it, though it be as easie as the multiplication of Vegetables and Animals, insomuch that I also believe, that there is not any one to be found, that is so stupidly foolish, that would not be able presently to apprehend and do the same, were the way but shown unto him. Now that there are so

many that erre, and who walk in an unlawful or contrary path, this is not to be imputed to the art it self, but to those that meddle therewithal so inconsiderately, and do not imitate nature, who always keeps her course allotted her by God.

The Multiplication therefore of the Metals doth solely consist in the knowledge of the seed; for as the condition or quality of the seed sown is, like fruits will follow, such nature as the seed you sow is of, such fruits will you reap, and no other. For Example, I seek after ☉: Therefore I must first of all, of necessity have the seed of ☉, at hand, afore I can sow it or multiply it. Now to have this seed, we must not set about it with words or imagination, but by (getting) the knowledge of nature; for she shews us the safest way, if we did not withdraw our selves from hearing her teach us. Now like as she commits ☉ and ☽ to the Earth, even so, and no otherwise must we also do, if we hope for any good success.

And as we said above, that there lies hidden in every Vegetable and Animal seed, a certain vital or procreating Spirit, without which it is wholly unfit for ought; even so, there resides a certain Spirit in the Minerals, which vivifies and effecteth all, which being absent, death it self follows. This spirit is of no weight or form, and there is nothing to be seen by us but only the habitation or house wherein it dwells; so that scarce the thousandth part of the seed is life and spirit, all the rest is dead. The truth of this thing doth (among other things) appear even from hence, *viz.* if some Vegetable seed be kept beyond its due and naturally appointed time, whereby the Vegetative virtue and spirit vanisheth, it doth not yield any fruit at all, nor can it multiply it self, though it hath its former shape, bigness, and former

weight. And therefore, there is not any thing in the three-fold Kingdom of either Vegetables, Animals, or Minerals, but is procreated and multiplied meerly and solely by the benefit of this spirit and implanted Life.

Therefore, even as all the Metals were first wrought after a spiritual manner by the Stars in the Earth (in a convenient Matrix) by the Stars, and made fix; so according as the Matrix it self is pure or impure, so pure or impure Metals are generated; now the Matrix of all things is water or moist earth, in which the Stars are congregated (or united together) are made corporeal, grow up, and are multiplied. Here therefore, if Art would imitate nature, there are required Male-like Astrums and Feminine Matrixes, in which the Astrums may exercise their operations. Therefore by how much purer the metallick Astrum or seed is, and the Matrix purer, so much the nobler effect is produced; and so on the contrary.

But seeing that there is not any Star nobler than ☉, nor Matrix nobler than ☽, there is no more required, but that we make common ☉ Astral by Art; and that we prepare ☽ on such wise, as that it may be instead of a Matrix, wherein the Astrums of ☉ may exercise his operations; and so without doubt, there will thence come such Children as will be like their Parents. Nor is there any ground for any one to think that there is any other way allotted to augment ☉ and ☽, besides that afore mentioned which is to be instituted in a spiritual manner: After this manner the World it self was Created, where the Spirit of God moved upon the Water and impregnated it; and even as we daily see that the Stars do impart to the inferiour things their virtues, and they are thereby multiplied; even so may we do the same by art in

these inferiour things; for such as are above, are also beneath. Those above are beyond our reach; but the inferiour ones, not so: For art can do the same with or upon the inferiour things, as the Stars upon the superiour ones. As *Hermes* doth clearly demonstrate in the *Smaragdine* Table. He that understands these my sayings, will also understand those things, which *Paracelsus* delivers in his Book of the *Vexation of Alchymists*, in the 5^{th}. Rule especially of ☽; and *Basil* (*Valentine*) where he treats of Sulphur.

It is a thing most easie to be done, but most difficult to be found out, to multiply even the most vile Metals, by the help of the Astrums, and by this secret way. He that well knows Salt-petre and can rightly handle the same, will by the help thereof perform a many profitable things; for as it is altogether impossible to get ☉ out of the viler Metals, without it: So on the contrary it is most easie so to do by its help. Briefly, He that knows how to handle Salt-petre aright, he will excellently well understand the Writings of the Philosophers, and let him know, that he has a light given him, to arrive unto great Secrets.

For we may extract ☉ and ☽, out of all the common meaner or viler Metals, so that an expert Chymist needs not seek after peregrine, or strange Materials. An excellent purification, fixation, and augmentation may perfectly be done by the help of Salt-petre, which being a thing that but few know of, so seems it impossible, and yet the things I propound are most true. It makes bodies volatile and spiritual, and by and by again makes them fixt and compact: So that unto it alone is that saying of the Philosophers due, (*Make the fixt volatile, and the volatile fixt*) and to no other Subjects: Now if Metals

be not spiritualized, there's no hopes of their augmentation. *Of something must a nothing be made, and again out of the nothing must something proceed*: So saith *Paracelsus*, which likewise is very true, though there are but a few that believe the same.

The melting together of variously mixt corporeal things, yields forth neither ☉ nor ☽: But contrarywise a spiritual Union which is done with a most strong heat, is a notable author (or promoter) of Multiplication; for the Spirits do most notably penetrate, and by variously acting upon each other, do induce alterations and meliorations, which is denied to dead bodies to perform. The Spirit doth diversly bestow a life, and vivifieth, but the body is of no other use, but to yield an house or habitation to the Spirit; the which is well to be regarded.

Those metalline Spirits (when the work is finished) do insinuate themselves anew into other bodies, which bodies they make far better than the former were, and all this by the help of Salt-petre.

Basil brings in Salt-petre speaking of it self on this wise. He that intends my death needs be a prudent Man, that so he may expel (or force out) my soul from me; when this is done, I adventure upon all the things I am able to do, but I can do nothing that has in it firmness (or substantially) in the bottom, (or radically): *Venus* is my chearful Woman, whom (in this place) I take to Wife, but the wedding is celebrated in the very inward parts (or center) where the sweat flows out of us both in a most plentiful manner. So the subtile (part) in us, expelleth all defilements, whence it is, that we leave behind us most rich Children, and do reserve (or keep in store) most eminent Treasures for the dead bodies, which we give them by our Will and Testament. Who would

speak more clearly, and would not understand these words of themselves, (or as they are) without any interpretation.

The ancient Philosophers wrote, that at the rising of the Sun is a Bird found in those hotter Countries; which builds his nest with Gold; and when he is grown old, and can live no longer, he gathers together exceeding dry Wood, which being kindled by the heat of the ☉, consumes both the Nest and the Bird too, from the allies moistned with rain Water, they say there arise Worms which will be again changed into other Phœnixes.

These sayings are indeed Fabulous, yet nevertheless there is a most high secret disclosed by them: for if we rightly consider all circumstances, we shall find that Salt-petre is hereby meant, which gathers the Gold into his Nest, that is, extracts the Gold out of Metals, Stones, and Minerals, and doth afterwards increase his Family by the burning them. This to a wise man is enough.

Now that this Arcanum may be the more manifest, I will add over and above, another way of extracting the fixt and volatile Gold out of Stones and all kinds of Minerals, by the help of Salt-petre, and of making them corporeal.

We may very well compare this work to a fishing Trade, concerning which the Philosophers have written many things, but very obscure; *Sandivog*, hath more clearly treated of that thing, but *Isaac Holland* clearest of all. Verily this Philosopher was an excellent fisher of Pearls and an excellent presser of Cheese, and for this very reason he assumed to himself such a name. For *Isacus* by transposition of Letters is the same with *Casius*, (or Cheese) So that it may be said to be *Holland* Cheese; not that *Hollandus*

was in very deed a maker of the usual Cheese with milk, but that he bears some kind of resemblance (in his work) with such Men: For he bestowed abundance of labour about working on that Universal, that hath some Cheese-like fashion in it.

Even as the *Hollanders* gather the greatest quantity of Milk more than all Nations besides, out of which they press their Cheeses, and so sustain them and theirs; so the more skilful Chymists do frame or make Cheeses after a Philosophical manner, and that out of Metals, Salts, and Herbs: and this very much agreeable to that method, according to which we see the *Hollanders* proceed in making their Sheep-milk Cheese, where they boil in the Milk some green Herbs, and so do thence extract a colour afore they set about the coagulating Or curdling of it. That is, they dissolve ♄ or ☽ in *Aqua-fortis*, and a Golden matter, though it be but ♀ or ♃ (if they have not at hand any better) in *Aqua Regia*: They mix together both solutions having both of them the form of Virgin-milk, and they add as much salt as is sufficient. (NB. 'Tis better to add Salt-water, or Spirit of Salt,) and you shall presently see that milk to be coagulated, like as (when we pour on some Salt-water or Spirit of Salt upon Cow or Sheep milk) we observe daily to happen: where the Water is partly separated by decantation, and partly by expression from the coagulated or cheesy substance wrapt up in a Linen cloth, that so a Cheese may thence be made.

Just so do we proceed in the making of our metallick Cheese; for when we pour Salt-water or Spirit of Salt upon the solution of ☽ or ♄ mixt with that (solution) which is of a goldnish Nature, *viz.* of ♀ or ♃: we presently see a precipitation made; which done we abstract the clear water swimming at

top of the precipitated matter, by inclination or pouring off; the which we may keep for farther uses, principally for the solution of other Metals and golden Subjects. We put the Cheese or white Coagulum abiding in the bottom of the Vessel, into a Linen cloth, and by strong squeezing it free it wholly from the wateriness, which said water is to be kept as well as the former, for being used about making new Cheeses, it makes them of the better savour, and more aureous and vendible.

This Whey, or that water which is plentifully gathered in the making the Cow-milk Cheeses, though it affords varieties of Profit to mankind, whether they give it their Hogs to fatten them, or use it themselves for their daily drink, especially in Summer time, or apply it to other uses as we see daily done, yet do not I see any better benefit than that which it yields to the *Curriers*. For they put in it some old Iron, and when the solution is made, they moisten with that water the hide already perfect (or ready dressed) and when 'tis dry they moisten it therewithal again, and this they do three or four times, until it hath gotten a fixt colour, blacker than a Coal. They do also sometimes administer some of it unto Children (with good success) to kill and expel the Worms: Nay more, they are likewise wont to make a Bath thereof very profitable for those that are troubled with the Scabs or Itch, because it hath gotten a drying force from the ♂, and thereupon it makes the skin smooth and hard: and seeing that the Country Fellows, and Labourers can do so much with it, what hinders but that we may institute such a curing more perfect, and that on this wise.

Take sweet Cow-milk, or (which is better) Goats-milk, two measures, boil it over the Fire, put

thereinto while it is yet warm ʒ *j.* or ʒ *ij.* of Spirit of Salt, mix it well, and you shall see the coagulum or curd presently separate from the whey; out of which, Cheeses may be made by expression, which are far better than others, by reason of the addition of the Spirit of Salt, whereto if you add some Cummine, Carraway, or some spices, they are yet better and more to be preferred. The Whey here separated is of a grateful savour, and by reason of the admixtion of the Spirit of Salt, is somewhat acidish, and a most certain and most safe loosner or absterger, being administred to Infants that are troubled with the Worms, or even to Elder ones that are feeble. How many Infants have we observed to die unexpectedly after they have been for some while and often afflicted with a burning Fever, the Convulsion fits, and other such like effects, and meerly because we will not perswade our selves that they have the worms, & so forbear the using any remedies to purge them out? Now in such a case this whey is exceedingly excellent, being used after this manner.

Take of the most subtile filings of steel as much as will lie upon a knife's point, mix it with as much honey as is sufficient, and give it the Children: and for their ordinary drink, let them use the said Whey, and so by this means, that filings being dissolved by the Whey kills the Worms, in the ventricle or stomach and drives them out, and verily is a most excellent Medicament; especially if taken two or three days; nor have I hitherto met with a nobler, than this is. And so there will redound some profit to Children and Infants too, by this our way of making Cheese, for which we owe immortal thanks to the Great and Glorious God.

Besides this, I have likewise observed the excellent

use of this Whey, in the administration of my Panacea of Antimony, if there be taken a draught or two thereof, at the end of the Purgation; for it gently carries off the reliques that stick to the intestines.

He likewise that is so minded, may before his dropping in the Spirit of Salt, add some Anise-seed or Fennel-seed to the milk as it boils, thereby to correct its Flatulency or Windiness.

And I do most curteously intreat the well-minded Reader to take it in good part, that I have been so prolix in declaring the virtues of our Whey; necessity it self, and the love of my neighbour forbad my concealing of them: For very many Infants are killed with the Fever, and Epilepsy, or Convulsion-fits, and so suddenly die, for no other cause but our not meeting with the Worms, which their bodies are full of, being ignorant of convenient remedies.

Now then to return again to our Cheese, and to demonstrate the most eminent benefit, both of it, and of our water which is thence separated; we are first of all to know, that even it is also able to tinge (some) subjects with a certain colour, not with such a black colour, indeed, as the Whey of Milk, prepared as aforesaid, dyes the Curriers Hides with, but with a yellow colour, and more durable than that which is given to the hide, for that we therewith extract a Tincture out of ♀ and other aureous Subjects, and with the Tincture, do sometimes anoint (or tinge) *Luna*. If now the water abound with such virtues; what virtues will not the Cheese it self abound withal? And like as our Cheeses are diversly impregnated with spices, so are they of different savour, and price, and more or less wholsome. But now if that virtue which is in ♃ is also added to our Cheeses, there will proceed from thence admirable

Cheeses; and this, that Philosopher was minded to point at, who writes that by the help of the Saturnine net, he is able even in a clear night to extract the little Fish *Eschineis* out of the Sea.

The Ultimate (or extream) letters of this word *Eschineis i.* and *s.* if conjoined together, so as that the letter *z.* be thereof made, and then the word read backward, it will sound in the *German* tongue the same with *Zienesch*, (*viz.*) the ashes of Tin; but yet let not any one perswade himself that those ashes of Tin are such as are made by means of the (bare) fire, but are prepared by the benefit of the spirit of Nitre.

Saturn does not only claim (or merit) the praises of being a husbandman, but also of being a good fisher, and hunter, as (among other writers) *Basil Valentine* doth egregiously shew.

When ☉, ☽, ☿, and ♂ pursue (or hunt) the wild beasts, ♄ is bound to carry the net: *NB.* the hunting dogs here are Salts, the hare that is caught, is much like the colour of the hares skin, being stript of the same, he will yield excellent flesh, which the Princes can as little want as the Subjects can. *See the foregoing Figure of the Hares and Hounds, with a Flaming Heart, and the word VENUS.*

Common Vitriol, but that especially which is found in those places where Gold is, is the green Sea containing excellent fishes.

Neither was *Isaac Holland* an excellent maker of Cheese only, as we said but now, but withal, he was a singular fisher of Pearls; for with the net of ♄ (the night being clear) we may catch most excellent Pearls, but yet 'tis a very hard thing to take them out of the net, nor can they be separated but with a great deal of prudence and art, from the threds of the nets,

to which they do stick so firmly.

But yet this separation is best of all done in a clear Light, the Sun shining upon the Earth with his beams, and wholly dissipating the Vapours, least it should be hindred by their being present. For the parts being exposed to the Air in a (perhaps he means unseasonable) seasonable weather are corrupted, nor does any thing remain behind but the shells. And even these shells do in their inside shew forth such diversity of delicate colours, as that the most ingenious Painter cannot imitate them with his pencil, and such they are as with which the other shells of mother of Pearl or the commoner sort cannot at all compare: For in one place they represent pure ☉, in another pure ☽, in another they are of a Green colour, Sky colour, Red, Yellow, and variously coloured, so that they much exceed in beauty, the Peacocks Tail. If then the shells are so fair as that we cannot sufficiently enough admire them; what I pray will the beauty of the Pearls themselves be? Nor let any one perswade himself that I do here cast Pearls before swine by too much divulging secresies; (no) for there are yet many necessary things hereto requisite to make the Pearls come in sight; and if so be that any one should know the way of dexterously extracting them out of the net it self; yet the fixing of them doth require abundance of labour still, whereby they may be able to defend their fairness and excellency, against all the Elements; however, in the mean time the lover of Chymistry, may delight his mind with those shells, and admire at the most admirable variety of the colours in them.

Some haply there will be, that when they have taken the said Pearl, by the help of ♄ and ☽, will

think it a most easie thing to separate it from the net, by the benefit of destillation; but let those good men know, that this is a thing impossible to be done; for I my self bestowed abundance of labour in vain on this operation, and this hath to my knowledge so happened to others too; for in the common destillation, that Pearl being commixt with the net, even the Mother together with the Daughter do jointly ascend and get out; and thus to do is not at all agreeable or helpful for the great work; though nevertheless *an excellent particular Medicament may thencefrom be made*. Concerning which, I have spoken in the second and third Part of my *Pharmacopœia Spagyrica*; nor may we expect (by such a destillation) the thing we wish for. But if so be you desire to see the Mother, wrap the net together with the Infant in pure linen, first mundifyed, and washt in the fire; or put them in a glazed Stove, and put fire thereunder by degrees, and make the Net and Pearl to sweat largely, which being kept apart, yields a singular Medicament, for to quench all the Internal heat of the Body, and always to cool the burning Mercury.

The provocation of the sweat being finisht, break the sweating glasses, and look for your Pearl, and you shall find that it is gone out of the shells, by the force of the heat, and is roasted (as it were) together with the Net, and cannot possibly be (as yet) seen; yet nevertheless it is brought to a farther maturity, and doth yield some profit in an especial (or particular) way. But the Sudatory it self, contracts incomparable Colours from the sweat of the Pearl.

Now then, live contented with the most beautiful mother, and delight thy mind by barely beholding it, until it shall please God to give unto thee, the infant also. When it was my hap at first to behold that

beauteous mother, my mind, that was wearied with the long labour of searching thereinto, was so refreshed, that I can scarce declare it with words; yea I was so delighted, that I placed that delectable mother in such a place, where it might lie always open to my sight, and that so long till she shewed me her infant likewise, which Infant verily was not unlike to *Cupid*. Do you also seek, and you will find what you wish for: Implore God, and he will give unto you; Knock at his doors, and they will be opened unto thee, if so be that GOD shall find thee worthy; for he bestows his Grace and Mercy upon none, but such as are of an humble and thankful mind. Take for an example of this some Tinder, or Touchwood, which being handled with dirty fingers, refuseth to take fire, though it be never so copiously smitten out of the Steel with the Stone (or Flint.)

All things depend on the mercy of GOD, nor can we effect any thing by our labour. Him only should we seek, and he will manifest himself by the works of nature, even as the nature of a man is known by Chiromancy, and Physiognomy.

Two contraries do always produce a third thing, and are the cause of every generation, and change of things; if fire be added to fire, there ariseth no new thing from thence; neither if you put water to water; but water and fire being conjoined, there are produced new Generations; for the fire acts upon the water, and impregnates it according to the nature and properties of (both) the water and fire; from whence there proceed things pure or impure, according to the purity or impurity of the water and fire.

The thing (or operation) it self, must be accurately known and handled, if you would have any good to

redound from thence unto you. The Sun is in himself always good, yet doth he operate as well evil as good. If this same Sun bestows his Rays or Beams upon the Rain as it falls down, the Rain doth thence contract (or get) a honeyish dew, which falling upon the blossoming of Trees, makes them corrupt. Now we cannot rightly impute this evil to the Sun or to the honey it self; but we see that it proceedeth from hence, (*viz.*) because that honeyed dew is not duely and speedily enough washt away with the rain, but is evaporated by the heat of the ☉; whence it comes to pass, that the blossoms wither, and worms are generated in them, and so the whole blossom is corrupted.

We will set down here yet, one more similitude for the sake of such as love the truth. Put case thus then; a diligent Gardiner walks abroad in his Orchard for his recreation, and if he happens to find a large, great and curious principal Apple lying on the ground, he presently takes it up, and does not only well view and consider of it, but tasts it too; which if he finds to be of an acceptable flavour, he seeks out the Tree it self, with an intention to pluck off more such like conditioned Apples; having found out the Tree, he much sets by it, or esteems it, because the fruits thereof do exceed all the rest in the Orchard, both in tast and fairness, and he takes care about that more than the rest, dungs the roots well, prunes off the withered branches with a sharp crooked knife, and artificially cuts off those that are unprofitable, and usually called suckers, that draw away the juice from the fruit-bearing boughs.

Even just after this manner doth a diligent Chymist act; if therefore, (as he walks in his Laboratory,) searching out the secrets of nature, he happens upon

a Golden Apple, he seeks after the tree, that bears such fruit, and having found it, he very charily keeps it, and ministers unto it all such things as are necessary to its conservation, that so he may thence receive more such like-conditioned Apples; and therefore gardiner-like he puts dung to the root, that is, Nitre; he prunes off the dry barren wood, and also the hurtful superfluous boughs, that is, the superfluous Sulphur, with a sharp red hot iron, whereby that same tree may, for the future, yield egregious or select fruits, without any impediment, which thing he also finds to come to pass.

NB. *Paracelsus* doth very openly set before us this labour in his *Cœlum Philosophorum*, in the sixth Rule of Mercury, where he saith, Sacrifice the fat Vervains (or superfluous suckers); and yet, these words of his, are only superficially lookt on, most people not understanding what *Paracelsus* means by those words, though he hath clearly and perspicuously enough signed his writings.

It is a necessary thing here for the Chymist to know, how the case stands, as concerning the metalline tree, and what is to be accompted its Root, Trunck, Blossoms, and Fruits; ♄ is the Root; ♂ the Trunck or Body, ♃ the Bark about the Trunck; ☿ the nutritive Juice between the Bark and the Trunck; ♀ the green Boughs and Leaves; ☽ the pleasant Flower, or Blossom; and ☉ the ripe Apple containing in it self the seed of the Tree.

That Apple which yet sticks on the tree, doth, when it hath arrived to its full maturity, fall down upon the earth, of its own accord, if it be not gathered by the Gardiner; and then afterwards the leaves themselves, when the weather is somewhat colder, fall off, which do as it were bury the apple,

which lying hidden under the leaves, is consumed by rottenness, by little and little; but the seed assuming to it self a natural humidity from the putrefying tree (or fruit rather) instead of nutriment, begins to take root in the spring time; out of which there grow up, in process of time, Apple-trees, which are to be in their fit season transplanted: this transplanting being finished, the Gardiner joins to such a wild tree, generated from the seed, the Scions of such fruit as he has a mind to, and that by either ingrafting, or inoculation. And so an industrious gardiner may get from the fruit of one tree, an innumerable company of great trees, and those of such a nature and kind, and grateful a savour as he likes best.

Even on this wise doth the Chymist do, joining fruitful Scions to wild truncks or stocks, by inocculation, so that he never wants good fruits.

He that cannot learn ought from these things, I cannot help him any other way, for I do not see how I can set down those things clearer than I have done.

But for the undertaking of this labour, there is required an Artist, no less diligent than ingenious. And of how much the better quality the dung is, that is laid to the root of the tree, and (by how much) the knife which the boughs are cut off withal, is the sharper that so it may not hurt the green (or growing) bark of the tree, and so the nutritive juice flow forth, so much the better are the fruits generated. As it is easie for a wise man to reap hence some things; so it's difficult for an imprudent man.

I doubt not but that there will be some, that being judicious men, will know that there is an opportunity given them by my writings, published out of a sincere mind, of making farther inquiry after a true transmutation, and consequently of esteeming it,

more than we find to be usually done (because that most things are oft-times proposed craftily and cautiously).

But that such a noble art may be freed from any farther contempt, I have purposed, the next following Spring, to frame a convenient laboratory, and to demonstrate the truth thereof to my friends. And although my endeavours shall be to prohibit any entrance by any means to the faithless brethren of *Farnnerus*, yet notwithstanding, I know I cannot so prevent and foresee, but that one or other may adjoin himself to the number of the true lovers of Chymistry, and feigning friendship, lay snares for me.

But put case that such a thing should not happen, it cannot be but that the Arcana's will be divulged; for such things as this or that man sees, and writes down, may reasonably be thought, will come to other mens hands after they are dead; especially if the preparation of Salt-petre be afore instituted, or set up in divers places; for nothing can be done in Alchimy, saith *Paracelsus* without Nitre; Alchimy is found to reside in Nitre say I. Salt-petre shewed us Alchimy, or, Alchimy was found out by Nitre.

He therefore that has abundance of Salt-petre, can perform egregious things in Alchimy. Had not the *Ægyptians* been possessors of great plenty of Salt-petre, verily they would never have been so skilful in Alchimy; nor could they have had those riches, by which they were able to avert (or decline) the yoke of the Roman Monarchy.

As long as they knew the use of Sulphur (Salt-petre I believe he means) they enjoyed Monarchy (without servitude to others) (and this was even to the time of *Dioclesian* the Emperour, who knowing their power,

commanded all the Books they used, to be burnt) and then their Monarchy and their Art it self perished together.

The Poets have feigned many stories of *Jupiter*'s Golden shower; certainly did we but know the manner of duely managing Salt-petre and 기 together, we should be likewise able to produce the golden shower.

Jupiter, when stirred up with anger, doth with his Thunder and Lightning, strike a terrour into all the Gods, and into whatsoever is upon the Earth; and yet the rain that falls then, at such a time, is of an excellent Quality, and makes the Earth more fruitful than the rain that commonly falls is wont to do; because there is a certain tinging and penetrating spirit sticking in the Thunder, that tingeth the air and the rain, and animates it; if therefore we can (by the virtue of Nitre, and this same 기) produce such Thunders, & can give to the Thunder fire & air, by which it might operate; verily there would nothing hinder, but that we might (*Jupiter*-like) make a Golden shower too. The purer the 기 shall be, and the more clear the Air, so much the purer will the Rain be, and the Air is more impregnated and filled with the common Vital Spirit.

He now that knows how to separate the life out of the water and air, rightly animated, gets a true *aurum potabile*, or the Soul of the world: besides this too, there offer themselves apparently such things to be done, as are able to exhibit his daily food. And thus much let suffice for this time.

He verily that perceives (or understands) not these things so clearly proposed, surely he will not, though all the Gods themselves should relate them, understand ought of those things that are taught. In

the mean time, I hope that my friends will see with their Eyes, and feel with their Hands, the most certain truth of these, and the like operations, and consequently of my writings, in a laboratory, which God willing, I will in a short time erect, and will then defend me against all envious, and carping men.

This one thing I will yet add over and above, that the astrum of Gold doth tinge his own proper Mercury, or (the ☿) of the first *ens*, (therefore) chiefest of all: The Astrum of ♄ (tingeth) ☽; the Astrum of ♃, common ♀; the Astrum of ♂, ♀; for those three superiours do always operate upon these three inferiour (Planets;) so that they are, as it were, upper men, and lower women: ☉ he is left in the midst, which whosoever adds unto the others for the compleating of the operations, will perform excellent things.

But he that knows how to make that Astrum of ☉ corporeal and fixt, he may translate the Astrum of ☉ on this wise prepared, out of one place into another, and conserve it like a Vegetable seed, to be implanted into all the Metals, in time and place convenient; which blessing, we rightly attribute to the blessed great GOD, the giver of every good thing, in the first place, and then to Salt-petre as being the Northern Monarch.

It now remains, that we briefly shew, by what means that Nitrous water, out of which that most noble Pearl, ☉ and Gems are taken with the Net, may be prepared for farther uses, so that such a fishing may need but very small costs, and may nevertheless (besides the daily food which it most plentifully provides us) bestow on us a most excellent medicament.

We have taught in the foregoing directions, how

we may by the help of *Aqua-fortis* or *Aqua-regia* most easily extract both the fixt and volatile ☉ and ☽ out of the Metals, Flints, Sand, Clay, and such subjects as are every where obvious, and precipitate, coagulate, dry, and reduce it into a fixt metallick body.

Now in doing these things, part of the separatory water here used, is as yet good enough, and may be kept for farther uses; but part thereof (*viz.*) that which is extracted out of the Metals by the help of common water, is, by reason of the mixing sweet or fair water therewith, rendred too weak for operating withal, and therefore must it be corrected and amended by some certain singular way, so as it may be again used about doing the same work.

Were it not for costs and labours we might separate that fair water from the *Aqua-fortis* and *Aqua-regia*, by the benefit of a glass Cucurbite, but forasmuch as there is given us a more compendious way, we will make choice of that.

For he that intends to get himself riches by the benefit of this separatory work delivered by me, or by the extraction of ☉ and ☽, will need a great deal of *Aqua-fortis* and *Aqua-Regia*, for what profit is it if you would extract them out of (but) a few Metals or Minerals? Seeing that scarce the one half of those strong Waters can be separated by pouring off from those subjects upon which they are poured, but the chiefest (or biggest) part of them sticks to the said metalline Matters, and contains in it as much ☉ and ☽, as that which we have abstracted by decanting it, and requisite it is that we thence abstract the same by the benefit of fair Water by due boiling, from whence it comes to pass that there will be also gathered a great deal of (insipid or useless) Water, (over and above.)

Those *Aqua-fortis*'s that are poured off, and hold in them ☉ and ☽, when they are mixt together, the ☽ and ☉ precipitates to the bottom of the Glass like powder, so that there remains nothing of the Metal in either water, nor is that water arising from the mixing of the *Aqua-fortis* wherein the ☽ was dissolved, and of the *Aqua-regia* wherein the ☉ was dissolved, at all the weaker, but it retains the virtues of extracting ☉ but not of ☽, because that the *Aqua-regia* being added to the *Aqua-fortis* converts it all of it into *Aqua-regia*.

This precipitation being made, and the clear water separated from the precipitation by decanting it, you may extract that acid Water, which yet adheres to the precipitate, with fair Water; but for as much as the virtues thereof are thereby much weakned, 'tis better to proceed after another kind of way, and we preferr this way (as best.)

Take the Calxes of ☉ and ☽ as they lie at the bottom of the *Aqua-regia* (or the acid mixt Spirits) and put them in a Linen cloth placed in a Funnel or over a Glass with a wide mouth, and the greatest part of the *Aqua-regia* will strain through into the Glass set thereunder; when no more water drops out, which we find is wont to be within half an hours space, tie up your cloth with a strong thred, that so nothing of the calx therein contained may get out; put it under some weight or heavy matter, that so all the *Aqua-regia* may be squeezed out, and the calx only may remain behind like Curd or new Cheese.

But for as much as the Calxes of ☉ and ☽ are not edulcorated, hence it comes to pass that the Cheese thence prepared, after the manner now spoken of, is as yet corrosive, nor is it easily dried. Both of them (☉ and ☽) we may easily correct, if we only admix

therewith (as 'tis laid in a dish) a fourth part of fixt Salt, for by the virtue thereof even the corrosive Spirits sticking as yet therein are mortified, and the exsiccation, cementation, fixation, & reduction thereof is promoted. The Reduction being made of ☉ and ☽ which we are now made partakers of, that goldenish silvery Masse is to be granulated, and to be dissolved in new *Aqua-fortis*, and be precipitated with that *Aqua-regia* by the help of which, ☉ hath been extracted out of the Metals; the Cheese is to be freed from the water by squeezing it, and is to be sprinkled over with a fixt Salt, and to be melted. And all these Operations are to be so often repeated as necessity shall require, and there shall be at hand any Metal whereout-of Gold may be extracted, and so there may thence arise a continual Labour, which is beneficial, because that *Aqua-fortis* may (when the Labour or Operation is finished) be used about other such like extractions, and that which is the weaker sort may be prepared into Salt-petre: out of which may be made anew, excellent *Aqua-fortis* by the addition of Vitriol or Copperas, and so destilling them. The Vessels wherein the precipitation of Metals is performed, yea and the presses too by whose help the water is squeezed out of the Cheese, must be framed of strong Glass or of glazing Earth well glazed.

But for as much as the Vessels of Glass are very subject to be broken, and earthen Vessels, unless they have the solidity of Glass, waste abundance of water, and so moulder away; it would seem more convenient in my judgment to make the expression of the water out of the Cheese, between two Plates of Silver, for the water of the Cheese doth not at all corrode the ☽: Yea and if the Tunnels requisite to this work were made of ☽, it would not be amiss, nor

would there be any fear of their breaking.

NB. The Extraction also of ☉ made with *Aqua-regia* may likewise be put into a Silver Cucurbite, whereby the work may be facilitated, and all loss and damage which otherwise may be lookt for (feared) from the using of Glasses, may be prevented. And suppose a Cucurbite, a Press and two Tunnels did cost one hundred imperials; yet notwithstanding the certainty and celerity of the Work will repay those costs very easily, seeing that all things are hereby done much safer, and much more speedily: Besides too, there's nothing lost but the price of the fashioning your Vessels, for the Silver is always of the same value, and may again be sold at your pleasure. But he that wants suchlike Silver Vessels or cannot buy them, he may make use of Glass ones so long till he can get Silver ones; but it is necessary that the Silver of which these Vessels are made be very pure, and have no Copper in it; least the *Aqua-regia* extract the Copper thereout of, and so the Vessels (especially the Cucurbites) do in process of time get an undue softness.

The manner of extracting Metals by the help of this Cheese-water, is already disclosed in the foregoing (writings); however this I am constrained to advise here, that it is much more expedient, to use presently at the beginning for the extraction of ☉, rectified Spirit of Salt actuated with *Aqua-fortis*, than *Aqua-regia*, because that by thus doing there will be more plenty of ☉ gotten in the reduction than when the operation is accomplisht by *Aqua-regia*. It would be too long to reckon up the cause of this thing in this place: 'tis sufficient that I have shown which is good, which ill. Nay more, Spirit of Salt is cheaper than *Aqua-regia*, if prepared according to my

description: Nor is there any reason to give credit to that slanderous fellow, *Farnnerus*, as if such a Spirit made by Vitriol, according to the manner mentioned in the first part of the Philosophical Furnaces, were not of any use, or at least-wise could not be prepared in great quantity by the aforesaid way: For when all circumstances fall not out as is wisht, the blame is not to be imputed to my description, but to the ignorance and unaptness of the Chymist himself.

If now those good men cannot accomplish such operations which are word for word faithfully described unto them: how would they be able then to arrive by speculations and various trials to the knowledge of any thing, as I my self have done? I do therefore attest here too, that we are able most easily to prepare not barely 10 or 20, but even 30, 40, 50 pounds and more every day with one only Furnace.

Nay more, if men did more accurately ruminate upon this business, they would find, that out of one pound of Salt may be made in a Glass cucurbite in sand, one pound of the best, most grateful Spirit of Salt needing no rectification, and that in one hours space: And by the benefit of a Furnace scarce a span wide, and with a very few Char-coal, scarce exceeding three pound weight. Verily if there be any artificial destillation this is it: And now let the Find-faults look about them and see if they can understand these things we have spoken; we can at all times demonstrate the truth hereof. It is altogether inconvenient to shew such an artificial destillation unto swinish Men, it is only due to the Lovers of the truth, of which sort there are to be found but a very few in this present age.

And that this is true, *viz.* that a most grateful Spirit of Salt may most easily be prepared in vast quantity,

doth even hencefrom most evidently appear, in that there are some in these places who having followed my information, do, because of their making it in great plenty and without any great Labour, sell a pound thereof for an imperial. For my own particular affairs do not permit me to take on me that Labour, yet notwithstanding, I have bestowed the artifice on such Men as now know it as well as I my self do, and who likewise do make that Spirit in such quantity as may supply all *Europe*. But forasmuch as I did not heretofore find out so far, as to see it excel *Aqua-regia* in the extraction of Gold out of such Stones, Sand, and Clay as contain Gold in them, and which are every where obvious. I could not omit the commending of it in this place, most highly unto all Men; for that Spirit hath an especial delight in ☉, not only in that which is fixt, but also with that which is volatile, whereby it extracts it and renders it fixt. There are some Minerals, Stones, Sand, Earths, which have in them abundance of volatile Gold, which is not in the least durable (or fixt,) but is carried up (or forced away) in the form of a vapour and vanisheth into the air, and so consequently not at all to be accounted for true ☉, seeing it cannot brook the force of the melting Fire. Besides this, there do oft-times occur moil precious Treasures of no profit to any man, which may be brought to most eminent uses (or benefit) by the Extraction, Precipitation, Cheese-making, and Liquefaction delivered by me. For such Metals as the Spirit of Salt do not tie and make fixt in the extractions, ☽ or ♄ makes them such, with which we have taken or fisht the *Sol* out of the *Aqua-regia* or Spirit of Salt; to the obtaining of which this is also of much conducement. If the Cheese now made be altogether fixt by the help of an artificial Cement, and the gradatory fluxing matter be

especially reduced in such a Vessel, out of which not so much as the least volatile part can evaporate: by which it comes to pass, that not only the volatile Gold you have caught is made fixt, but even a part of the net of ☽ or ♄ is by graduation made aureous: For every volatile Gold doth exercise its operations in the Fire upon other Metals, and makes them aureous, so that the *Sol* ariseth thence to be of a greater quantity, than that was which by the help of the silvery or leaden Dart was taken out of the extract. Heed these things and proceed on in a legitimate course, and you shall find such things as you cannot as yet conceive of. The Fishing is clearly enough described in this place, and so is the Cementation and Reduction of the Cheese clearly proposed, and may be most easily perfected.

But God (if thou becomest acceptable unto him) can yet shew unto thee a much more compendious way of perfecting this work with less labour, and of obtaining greater things.

Be content for this time with what hath been at present taught, give God the thanks and forget not the Poor, and He will then shew unto thee more and more compendious ways, of cheerfully managing the work (here) described, to his Honour, and the Comfort of the Poor, and without any wronging thine own Conscience, or hurting of thy Neighbour.

You need not be much sollicitous about such kind of Earths, Stones or Sand, from which you may extract the Gold, for every land is every where stored with such, nor need we spend much time in searching after them. Likewise it will be a most easie thing for thee by my writings to make Salt-petre, of Salt-petre to make *Aqua-fortis* and *Aqua-regia*: One bare pound of *Aqua-fortis* may be sufficient for thee

to begin the operation withal, for there is not much of it lost in the work it self; and what of it is wasted may easily be repaired by an addition of common Salt: And as for the extracting both the fixt and volatile Gold and *Luna* out of the Earth, and of perfecting it, thou hast no reason to hope of finding a more compendious way than that is which I have here exhibited unto thee.

You may leave such Metals (or Ores) as have in them plenty of *Sol* and *Luna*, unto others; and take only the scoria as 'twere, and thencefrom extract your part, and none will forbid you that. But if so be thou canst be but a partaker of an aureous Earth (or Ore) then will all things fadge the better.

NB. The ☉ and ☽ that is in the Extractions may be precipitated by the help of ☿, but much more chargeably and more difficultly than by ☽ or ♄, because the ☿ used in this operation cannot be used a second time.

NB. The ☉ and ☽ may be also extracted from the water without precipitation; by abstracting the *Aqua-regia* from the ☉ and the *Aqua-fortis* from the ☽: but besides this kind of proceeding being full of Labour, we should receive but little fixt Metal, and scarce the one half of what is gotten by the aforementioned way: For the ☽ and ☉ do retain with them some part of the *Aqua-fortis* and *Aqua-regia*, and thereby become sharp or sour which is a thing contrary (or an Enemy) to all Fluxes, and which also does not only cause an evaporation of such Volatile Gold and Silver as is therein, (but withal some part of that which is fixt too,) in the melting. But now in this Fishing trade that I have described, being caught it is either edulcorated, or the corrosive power is extinguisht by the addition of a fixt Salt; so that

hereby the ☽ or ♄ holds with it self as well the volatile as fixt Gold and ☽.

NB. He that shall institute this operation aright, will find that the volatile Gold will (in the secret Reduction) yet farther transmute part of the ☽ and ♄ into ☉ by Graduation, and so will reap a double (portion of) ☉ for which God is deserved to be thanked.

I have herein been more prolix than I intended, which I entreat others to accept in good part: It could hardly be that the things I have delivered, could be couched in fewer words. Wise Men indeed need not many words, but where are such? Better is it therefore to set down things at large.

Now it follows that we shew by what means we may have benefit out of the edulcoratory Water, and not be forced to throw it away.

We have taught in the precedent discourse, how those waters which ☉ is extracted and precipitated with, may be used for a farther extraction of ☉: For when the *Aqua-fortis* in which ☽ or ♄ is dissolved is mixt with the *Aqua-regia* wherein ☉ is dissolved, there ariseth not any mutation or changing, but that ☽ or ♄ only which was in the *Aqua-fortis* settles to the bottom, so that this water wherein such a precipitation is made, may afterwards serve instead of *Aqua-regia*, and so consequently with it may ☉ be extracted out of the Metals.

But seeing that the precipitated ☽ or ♄ must be excellently well edulcorated by often pourings on of water, afore it be dried, hence it comes to pass that there is gathered a vast deal of such edulcoratory Waters. Now that even this may not be thrown away

as useless, and that nothing may be lost in so noble a work, I have here determined briefly to declare, by what means we may likewise catch some benefit even out of that too.

To do this, 'tis necessary that the useless water be separated from the *Aqua-fortis*; now such a separation cannot be effected in metallick Vessels because of the sharpness of the *Aqua-fortis*; least in length of time they should be dissolved: But to perform the same in Vessels of Glass would take up much time and fire; there is therefore of necessity another way here required to perform the same; and a better than this, which I will here deliver, I think can hardly be contrived. Make you therefore an Arch of Lime, Ashes, and Horse-dung, according to the afore prescribed manner, where we treated of making Salt-petre (about the beginning of the book) dry it by putting fire thereunder, *&c.* The Arch being dryed, pour on, by little and little, so much edulcorating water, as the Arch is capable of attracting, and until you shall find it to be made thoroughly moist; the Arch being on this wise moistned, dry it again: and being dryed moisten it again as afore. And so repeat this work of moistning and drying so long till the Arch will receive into it self no more water. This done, there remains no more, but to do thus, *viz.* Let the said Arch be broken to pieces, and be ground with a Mill into fine powder; upon the powder let be thrown fair water, and so let there be made a Lixivium, out of which by due boiling may be made most excellent and delicate Saltpetre.

But here must be very good heed taken, that you use about the building of the Arch, Wood-Ashes, and Lime made of Stone (or Chalk); whereby the

sharpness of the edulcoratory water may be extinguisht (or mortified) by the fixt Salt inherent in the ashes and lime, and the corrosivity be taken away, and most excellent Nitre may arise thencefrom; for if *Aqua-fortis* be permixt with the fixt Salt of wood-ashes, both of them lose their Nature, and Nitre is made thereof.

But that the operation may more luckily succeed, and we may be the more certain of the event, it will be the best way, to put in, by little and little, some Lee of wood-ashes first of all, (afore the edulcorating water be thrown upon the Arch) and this putting on, to be so long continued till all ebullition and noise cease, whereby all the sharpness of that water may be taken away; this done, that water is to be poured upon the Arch, and you are to proceed on according to the afore-prescribed method; and so shall you have excellent Salt-petre, whether your Arch be made of Lime and Ashes, or of Mud and Ashes.

NB. If this taking away of the sharpness of the edulcoratory water by the benefit of a wood-ashes Lee, be not finished, and done before it be poured upon the Arch, it is clearly requisite that it be done in the Arch it self, by the goodness of the Lime and the said ashes, by which that sharpness may be extinguished.

It is, I confess, all a case whither that sharpness be extinguisht with a *Lixivium* afore; or else be done in the Arch it self. Yet nevertheless, seeing that Operation is the safer which hath a foregoing taking away of the sharpness afore it be poured on the Furnace, therefore it is better so to institute it; specially, seeing it then matters not at all any thing, what condition the matter is of which the Arch is made with; because then such a water needs no more

but an unfolding (or evaporation) and coagulation, and this may as well be done by the help of an Arch made of mud, as by one made of Lime: Otherwise if the sharpness of the edulcoratory water be not taken away by the *Lixivium*, an Arch made of mud is of no use, for by this means you would not get any *Salt-petre* at all, but rather all the water would be consumed by evaporation, which need not be at all feared, if we use an Arch made of Lime and Ashes, seeing that that water is by this means mortifyed.

And so, by this means, that edulcoratory water may be most commodiously prepared for farther uses, and the Salt-petre which is extracted thence, is exceeding good to make *Aqua-fortis* with; and we may gather as much in quantity thereof as the extraction of ☽ and ☉ out of the Metals, Stones, Clay, and Minerals requires.

NB. If any one be desirous of more excellent benefits, let him dissolve, in that edulcoratory water, (*B.*) or (*C.*) and in the Lixivium (let him dissolve) (*D.*) then mix both Solutions: When the fermentation is over, he will have double the quantity of Nitre, than what he would otherwise have from the bare mixtion of the contraries together, and pouring them on the Arch; the reason of which thing is this; because (*E.*) is nothing else inwardly but Nitre, but it cannot come forth to light before the body be broken, and till that salt which sticks (or lies hid) within, be wholly freed (of its bonds) whereby it may be turned, together with the Corrosive Spirit into Nitre.

The like is to be understood of (*F.*) because even that also is broken (as I may say) to pieces by the Lee of the wood-ashes, and so the Salt that lies hid within, and which is nothing else but Nitre, shews it

self to sight, and passeth with the other Salt of the Lixivium into Nitre.

Certainly this labour, *viz.* the mortification of the edulcorating water by a Lee of wood-ashes, and the concentration of Nitre, upon the Arches made of lime or mud, is an egregious invention; nor do I think that this business can be better managed any kind of way, than by what hath been here shewn, especially if the Species, here notified, be also thereto adhibited (or made use of) (I know not I say, any way) by which greater plenty of Nitre may be gathered; for the coagulation cannot be done in a Copper or Iron pan, because not only the Pan would be corroded and wasted, but the Nitre would be rendred impure. But if now the operation be instituted aright, we shall get more Niter than indeed is requisite for the extracting ☉ and ☽ out of the Metals; so that we may get us ☉ and ☽ without any costs: which invention verily is a most noble one even in all parts of the World, and a most high gift of God: for which, we have good reason above all things to render Him deserved thanks, and next Him, to those who open such a Noble and Unheard-of Invention, and which is so profitable to all Men.

But this Invention will be especially profitable in those places of the World, where *Aqua-fortis* is much used, and is presently after the first using thereof, thrown away as unprofitable, as it usually happens in the Mint houses, where abundance of ☽ and ☉ is separated in great quantity, and consequently abundance of *Aqua-fortis* consumed, so that by the benefit of this invention of mine, we might get much every year; but most of all in those places where are found such Stones and Sand which are endued with Gold, but yet will not yield any by the help of the

usual melting.

Besides too, this invention is exceeding profitable for such kind of Metals of ☉ and ☽, that have not as yet gotten their due ripeness or fixity, and so fly away in the melting, and yield either none at all, or at best but very little of Gold. For the common melting fire forceth away the Volatile Gold, and ☽ that resides in the Metals (or Ores) which is not at all so here, for all (of it) is made fixt by the *Aqua-fortis*, and preserved.

I do believe that there is not a place to be found, where such kind of Stones, Sand, or Clay may not be gathered, as hold in them Gold and ☽, either fixt or Volatile, and which may be extracted thencefrom most easily, and with exceeding profit according to the way aforespoken of.

But, for as much as there are many, who pretend that such like Stones, Sand, Clay, and Minerals as have Gold in them, are no where to be found, and that consequently this invention of mine is altogether in vain: To such as these I thus apply, *viz.* That such like Subjects are therefore unknown, because few there are that seek after them, or are willing to experience ought, but remain contented with such things only as the Ancients have taught, and perswaded themselves that ☉ and ☽ cannot be separated out of the Metals, but only by the force of fire, where as notwithstanding the operation may be far easilier, and more profitably instituted, according to the method by me prescribed, but especially in those Metals (or Ores) of ☉ and ☽, which either require too much expence for their melting, or are as yet unripe and volatile, and so fly away in the melting; for a great quantity of ☉ and ☽ may be extracted with a little quantity of *Aqua-fortis*; yea the

extraction being duly made, and to the best profit, there may be thereof made Salt-petre; so that such an extraction of ☉ and ☽ requires but very little costs.

If any one desires an easier way of extracting ☉ let him use Spirit of Salt prepared after the manner by me delivered, which said Spirit he may fortify by adding a fourth part of Salt-petre, which very same (when the Extraction is finisht) may be reduced into Salt-petre, like as we have said of *Aqua-fortis* that hath been already used.

NB. An easier operation yet then all these, is this, which may be performed the dry way.

Take the Metal, Stones, or Mineral, reduce them into powder, mix them with the Salt (G) and make them with clay into Balls about the bigness of a little Head. Make these balls red hot, and by this means the Salt will dissolve the *Sol* in the Fire, and attract it out of the Metals. This done, grind the Balls or Pellets, and extract thencefrom in a large Pot or Vessel a Lixivium with boiling hot water, for the Salt which hath attracted the ☉ in the Cementation, mixeth it self with the Water: Out of this Salt-water mayest thou afterwards catch the ☉ by the help of a Solution of ♄, added for the precipitation; now out of the Salt it self mayest thou make excellent Salt-petre. So that you may most easily extract out of the Earth both fixt and volatile ☉ and ☽ without any melting it. Nay not only ☽ and ☉ but even Copper too, whether we proceed the dry way or the moist way: For we may extract good *Sol* out of the scoria of *Sol* and *Luna* and *Venus* which are cast away, yea and out of *Mars* it self too, and by the afore-shown way.

NB. The reason is this, because the Iron being purged in a strong Fire is heapt up as it were into goldenish Scoria which but few know of, and will

believe, though it be most true. For when a Metal is so burnt with such a vehement Fire as to referable glassy Scoria, it hath gotten to it self a more noble nature, and thenceforth is able to exhibit or yield good *Sol*: Yea though they be the Scoria of ♀ or ♂, which thing that excellent *Metallurgist Isaac Hollandus* did also know, when he said, *If any one makes* ☽, ♁ *or* ♂ *into Glass, and reduceth it, it will not be* ☽, ♀, *or* ♂, *but* ☉*: And if any one full turn* ☉ *into Glass, and then reduce it, it will not be* ☉, *but Tincture*.

Nor was this knack unknown to *Bracescus*, who taught the making of the Philosophers stone out of the scoria of Iron, but he is laught at, by another Philosopher, though undeservedly. Though I do not know the way of extracting the Tincture out of Iron, yet this I know; that there have been many who have extracted good *Sol* by *Aqua-regia* out of the very green Scoria of Iron, when notwithstanding, the ♂ it self out of which the *Scoria* came was destitute of Gold; the cause whereof we showed but now.

Now if they had but known my invention of most easie preparing a convenient Menstruum for the extracting of the Tincture, and then the manner of afterwards separating the *Sol* again, without losing the Water, certainly they would have been able to perfect that Extraction with a great deal of benefit, whereas (not having this) they only beheld the possibility of the thing without profit.

For if this Labour be instituted according to my invention afore-written, we may extract the *Venus* (which commonly is in the poorer Minerals) out of them, and that with much profit and in great quantity, and the extraction being made, (whether it be done the moist way or the dry) we may by the benefit of the solution of ☽ or ♄, get out the ☉ thence

whilest it is yet mixt with the water, yea and afterwards by the benefit of ♂ the Copper it self. He now that well understands the reason of this Fishing and reduction needs not to search after the Metals (or Ores) of *Sol* and *Luna*, for whatsoever Metals (or Ores) of *Venus* contain but even a very little portion of them, will be able to furnish a man with necessaries sufficiently enough.

But that the Reader may not think that these sayings of mine, *viz.* that there are subjects to be in all places found that are endued with Gold, are fictions, and are not founded upon any experiments, (for I doubt not but that abundance will not only account these sayings for falsities, but deride them too) I thought it not much from the purpose, if I shewed some little place only, where you may find such Metals (or Ores) as are endued with Gold, which notwithstanding were never brought into use, that so it may hence appear that such Golden subjects must be likewise found in many places.

Let us therefore cast an eye to a part of the *Mhene*, and let us get out those Treasures that are there hidden, and at present are not profitable to any, which nevertheless may be of mighty conducement and benefit to the whole Inhabitants of those parts.

The *Mhene* is a River most abounding with Boats and Fish; it hath its rise out of a very high pine-bearing Mountain, it is in some sort conjoined with three bordering well known Rivers, *Sata*, *Adrana*, and *Nava*; which again spread themselves unto the ¾ quarters of Heaven, as *East*, *South*, and *North*. (*This piniferous Mountain is not barely one Mountain, but consists of many which are exceeding full of* Pine-trees*,* Beech*,* Oakes*,* Birch*, and other Trees set very thick together, and so yields an Harbour for both wild and*

tame Beasts.)

This Pine-bearing Mountain, and which is the highest in all *Germany* (and of which *Gaspar Bruschius* wrote a particular Treatise, which is exceeding profitable for such as study metallick affairs to read,) is stored with many notable Metals (or Ores.) For there was not only Gold digged out plentifully in various parts of that Mountain, many years since, (and thereupon there's a City called *Goltgangh* by the *Germans*, as if you should say a Vein of Gold:) But withal the other more common Metals that lie here hidden do for the most part all of them contain Gold, with notwithstanding is not at this day by reason of the ignorance and unskilfulness of Men separated from them. Nor are the bare Metals only of that place all of them endued with Gold, but almost all the Earths, Sand, and Stones have *Sol* in them. Yea even in this time even Antimony the first *Ens* of Gold is digged out in that place. Therefore it may most easily be proved, that this Mountain out of which the *Mhene* flows forth is stuffed with *Sol* both in the outside and inside parts, with which proof I must at present in this place rest, least I should be too tedious. All such as are skill'd in metallick Affairs do well know, that all the metalline Ore, that they get in and about this Mountain, is endued with Gold.

The most studious searcher of nature *Mathesius* in *Sarepta* testifies that he saw an Iron Stone or Ore endued with Veins of fixt and malleable Gold.

The afore-praised *Gaspar Bruschius* in the description of this Mountain, mentioneth amongst other things, that in a little Town called *Einsiedel*, situate near the said Mountain, was a Tin mine heretofore found, by the Treasures of which the aforesaid little Town was built. There did a certain

Metal-man called *Sigismund Wans* learn from an *Italian* Woman, whom he married after the death of her former Husband, how *Sol* was to be separated from *Jupiter*: From whence he got him so much riches, that even afore he died, he caused an egregious Hospital to be built, and withal contributed thereto many thousands of Crowns, with which twelve ancient Men, and three Priests should be always nourished; to the performance of which there is verily a great deal of Gold required yearly.

This now is not to be at all accompted as a meer fable, but the very pure truth: For in that edifice, the Effigies of the Founder *Sigismund Wans*, and the Foundress *Barbary*, are yet to be seen even at this very day. Of which likewise *Matthew Merianus* in his Description of *Franconia*, maketh mention. But it is sufficiently enough evident (besides these Testimonies) that this Mountain is repleat with Metals (or Ores) and especially with Golden ones, both within and without, and hence arose that Proverb of the ancients, *viz.* That the Country-man doth in this Pine-bearing Mountain oftentimes throw a stone at an Ox (or Cow,) that is more worth than the Ox it self. Strangers give credit hereunto, as *Italians* and others, and do yearly visit this Mountain, and dig the Gold out of those places where they know there lies much hidden, and take it up at their backs, and carry it away with them: And many such there have been with me, who have afforded their help to strangers in digging out Gold: Who forasmuch as they knew not the manner of extracting it (and that they understood by others that I also dealt in Metals,) brought me various kinds of Earths, Stones, Sands, Clays, that I might try what was in them: and they did all of them abound with Gold.

The Country-men that live about that Pine-bearing Mountain do daily for Gaine's sake carry such earths and stones, endued with Gold, unto *Norimberge*; which one or other likewise buys, extracting thence by melting excellent Gold.

But now if so be these men did but know the extraction of ☉ by the help of *Aqua-fortis* only (without melting) out of the earths and stones (as is here taught): the needy Country-men might live like the richest Citizens, the Citizens like the Nobles, and the Nobles like Princes; which seeing it hath not so pleased God (to have it) all (these) things have remained hidden. Every one may easily believe the things I here utter, Seeing it is already taken for granted that this Mountain doth abound with egregious Metals (or Ores,) and especially with Golden ones. Upon this accompt therefore the most Noble Marquess of *Arspach* who is Lord of this Pine-bearing Mountain hath prohibited any Foreigner from exporting such Earths (or Ores) thence for the time to come; and though he hath thereby done something to it, yet he cannot wholly hinder it, forasmuch as that Mountain is too vast and large.

But now when I pass down from this pine-bearing Mountain along the *Mhene* downwards, to such places as are more plain (or even ground) where Wine and Corn grows, there's no body seeks after *Sol* and *Luna* there, but each man professeth himself well enough content with the Wine and the Corn, nor hath there been any Metal digged thence or there sought for many years: Because they thought that no plains can produce Metals, which thing I judge to be false, and do gain-say it; and contrary-wise affirm that there are some parts in plains, that as to the production of Metals may be compared with the

most high Pine-bearing Mountain. Now, elsewhere there ly high Mountains of each side of all the *Mhene*, out of which there comes a mighty quantity of Wine, but the Metals ly hid to all.

Besides these, I my self tried, that there are Ores of all kinds to be found on both sides the *Mhene* throughout all the East of *Franconia* even to *Maguntia* where the *Mhene* runs into the *Rheine*, but yet as far as I know, there is not any Metal anywhere digged but Iron only; and therefore neither can I positively shew and direct to such or such Mine-pits, out of which you may apparently get Gold and Silver, but as is said, there are every where found some footings (as 'twere) that contain Gold and Silver, and that such Stones in the *Mhene* are rarely without Metal: But no body proves or tries them, or puts them to use.

At *Bamberg* (which is an Episcopal Metropolis) men are become more diligent, insomuch that they have found out several places wherein is to be had the Metal (or Ore) of *Sol*: Such as this Metal (or Ore) of *Sol*, hath been very oft-times brought me by the Inhabitants of that City, but all of it in a manner did contain a fluxile and immature Gold, which cannot be extracted by the common way of melting, but vanisheth away into the Air, and so I did not at that time much esteem it, but left it as an unprofitable Ore. But now I have found that such fluxile Metals (or Ores) of *Sol* may be brought in use, not by the help of a vehement melting, but only by a nitrous Water, in which this kind of fluxile Metal (or Ore) of *Sol* is fixed in the extracting it, and then stays in the melting, and yields perfect *Sol*.

Concerning such a fixation of fluxile *Sol* in stones, by a nitrous Water, I did not at that time know it,

otherwise this knowledge of mine would have been extraordinarily profitable to the Inhabitants of those places. Yea and the Bishop of *Bamberg* himself who is a great Lover of the Metals gave me some proofs of his Clemency for services of no moment that I did him, so that I would then gladly have bestowed my utmost power in lieu of his favours, but nothing could be effected by the way of melting, because of the volatility of such a Metal. But now there may be gathered very considerable Treasures by the benefit of nitrous Water. For not far from *Bamberg*, there is found a Stone of great bigness that is exceeding full of Granates, which are about the bigness of Millet or Hemp-seed: Besides too, all the Mountains of that place do most plentifully abound with Metal (or Ore) of *Sol*.

There is such a Vein of unripe Gold, not far from *Bamberg*, that lies thwart the *Mhene*, which much hinders the Vessels, and especially those Boats which are wont to bring vast quantities of Boards, Beams, *&c.* yearly; insomuch that they cannot always get over it, but at such time only when the waters are increased. Now in the Summer time, when Rain hath not fallen awhile, this Vein is seen bare, when the water is fallen away some Ells height; and hereupon the Mariners have smote against it with force, and Tools thereby to remove it, if possible, but all in vain.

But for as much as I never was minded to run thither, nor yet am so conditioned, as that envious Dog, who having hay under his possession, could neither eat it himself, nor would suffer the Ox to eat the same; therefore I was willing to lay open these things: I cannot at present say any more of this fluxile Ore of ☉; yet if any one desires more, let him

repair to an Inhabitant and Citizen of *Bamberg*, by name *N. N.* a Farrier, who many times delivered to me that kind of ore during my aboad at *Kitzing*. This man will satisfy every ones request, and will shew where it is to be found.

There have verily been others that have brought unto me various kinds of Ores; but I have long since forgotten their names. If you only seek, you will find in that place, abundance of such Golden Metal (or Ores) but all of them in a manner, fluxile (or crude,) and possessing but little fixt Gold, and although they should not have in them any fixt ☉, and that not any thing could thence be extracted by the way of melting, yet notwithstanding it is now known to *D. G.* by what means (by the liquid way of Nitrous water) all the fluxile (or crude) ☉ may be abundantly extracted out of the stones, be fixed, and be turned into good ☉ with abundance of profit.

The *Mhene* near *Bamberg* is occupied with Vessels or Ships, and I my self have sailed along the *Mhene*, and on both sides of the *Mhene* from *Bamberg* even to *Wirtzberg*, did light upon various kinds of Metals (or Ores) which were not void of ☉ and ☽, out of which much ☉ and ☽ may be extracted by the help of this invention of mine, by the moist way by Nitre water, if men would but only apply themselves to the work.

But indeed the Corn and the Wine which God hath so abundantly vouchsafed to those Countries, is the cause that no body minds any thing else, for they have enough to suffice them, and therefore leave the Metals (or Ores) of ☉ and ☽ untoucht.

Without doubt, the whole Wood that reacheth from *Wirtzberg* or *Kitzing*, even almost to *Bamberg*, is full of Metals (or Ores) and yet (as far as I know) there is not digged any of the Metal (or Ore) of *Sol* or

Luna therein.

It is reported that there was *Sol* and *Luna* digged up heretofore at *Cassel*; at the other side of the *Mhene*, towards the Town which the *Germans* call *Koningshoefen*, in the Mountain they call *Hasbergh*, there was heretofore, Copper digged, which now is left of, because the Copper is not fusile enough, nor hath it any sulphureous flint joined with it, by the help of which it is made fluxile (but is) inclosed in a Sandish Stone. Now out of 100 weight of this, there can hardly be extracted, by the help of a strong melting fire *iiij*. ℔. for the Sandy Stone being destitute of a sulphureous flintiness, doth in the melting turn the Copper it self together into Scoria; yet notwithstanding we are able by the help of Vinegar to extract above *xij*. or *xvj*. ℔. of Copper, and this I have tryed more than once. But whether or no that Metal (or Ore) of Copper, contains in it any Volatile Gold, I never tryed, but that there is some ☽ therein, is true; yea, and the Copper is very malleable, and we can thence extract by the help of Vinegar, that which is most fair, and this I humbly declared to the most noble *Moguntine* Elector, he being at this time Bishop of *Wirtzberg*; but by the Tryers (or Refiners) of that place, it is haply accounted of as unprofitable because it yields but little by the help of Fusion.

I must needs confess that but little can be gotten out by melting, but such Copper may be profitably extracted by the Acetum of the Wood, which Grows in the places all about in abundance, and may be had for nothing.

The *Mhene* doth every where yield such kind of Flints as are endued with Gold. Near *Carlstadt* there offers it self in a Wood a certain white and fat Earth, and after some sort silverish, otherwise firm (or strong,) and is fit for making of Crucibles, and other Instruments (or Vessels) to be used about the Fire.

You may likewise find such conditioned Earth at *Klingenberg* upon the *Mhene*, where most excellent Wine grows, which the *Glass-makers* of *Spechart* use to make the Crucibles or Pots in which they melt their Glass.

It hath not as yet been known that there hath been any Ore found in the County of *Wertheimen* where great plenty of *Russellein* Wine is gathered; yet nevertheless I have proved several Earths, which I found about *Breiberg*, which is the inexpugnable Castle of the Lord *Charles Ferdinand* the Count of *Wertheimen*, in which I found there was contained much Gold.

Besides these, I found opposite to *Wertheimen* where there are Vineyards, an Iron stone (white like snow, covered over with other stones,) which is endued with ☽ and ☉: as to the external shape it resembles a white Flint, very weighty, so as that it scarce yields to the weight of a piece of Iron of like bigness: But it is nothing regarded, and is accompted of as a common stone.

The County of *Erbach* doth indeed yield plenty of Iron, but there is nothing at all found of other nobler Metals; yet my opinion is, that even in this Iron are contained both ☉ and ☽: because that there is sand found in several places thereof which yields good Gold, as I have observed more than once; the extraction of which may be excellently well

performed by the benefit of Salt-petre.

Likewise Talk of sundry kinds is found in the said places, which is endued with ☉ and ☽: and it would easily yield them forth, were it but rightly handled, and dealt with according to the way by me prescribed: which hitherto we never heard to have been done by any.

The County of *Erbach* and likewise of *Wertheimen* do abound with Iron Metal (or Ore) and all kinds of Minerals, which contain in them, ☉ and ☽.

Nor are the Metals (or Ores) of less goodness that are in the *Specharten* Wood, and the bordering Countries; and yet notwithstanding 'tis evident that it yields nothing at all save this, *viz.* That there is excellent Salt made there and Glass, in great plenty. It is a thing well enough known to all men that here are various Metals (or Ores) found, but never hath any so procured as to have them wrought upon, and thereby to enjoy them.

We find in Several places, an Earth impregnated with white, black, and yellow Talk, especially (in that part) which is near to *Aschiburg*, and which contains both ☽ and ☉: which notwithstanding by reason of the smalness of the quantity thereof have never hitherto been thencefrom separated.

Not far from a Village which the *Germans* call *Schiltkrop* there offers it self a stony Talk, Somewhat ruddish, which besides Copper contains also volatile ☉, and of no use at all because there's but little ♀ therein contained, and that the ☉ is volatile and cannot be obtained by the means of melting. Perhaps this Talk was known even of old time, for the place where it is found in plenty is by the Inhabitants of that place called the Gold-pit even to this day: for it

is not incredible but that there was Gold found there.

However there is not at this time any extracted out of that Talk. I have very often extracted thence most beauteous Verde-grease by the help of destilled Vinegar. For seeing that there is plenty of Wood to be had in that place, and consequently requires no costs, we may get us vast quantities of Acetum *gratis*, (or for nothing): and by the help thereof extract the Copper out of the said Talk: Verily many noble Nen would have (thencefrom) whereon to live honourably.

NB. But if we make a Spirit of Salt, and with it being fortified with a fourth part of Nitre, extract the Copper and the ☉ out of the said Talk, and then first catch the ☉ by ♄, and then precipitate the ♀ by ♂, we shall not only have very malleable Copper, but shall likewise receive even pure ☉; and this I testify upon my own knowledge.

He that hath determined the experimenting of these things, and yet sees that he does not rightly perceive the things we have here mentioned, I advise him to come unto me in a friendly way, and I will not be wanting unto him to serve him and the Country by any farther information.

Verily there lie hidden incredible Treasures in those places, which none know of, and which yield nothing at all by the help of Liquefaction, and which we are constrained if we would have them fixt and metalline to make them so by the benefit of a sharp Water, and this I was willing to open and notifie for the Countries sake.

O thou Zoilist or Carper that understandest not this knack, pass not thou thy judgment hereupon, but rather examine thy Wines, and tell us which is best:,

either the *Heubachen*, *Klingenbergick*, or *Wertheimen* sort: Verily neither of these Liquors though they are strong, are convenient for the extracting of *Venus* and *Sol* out of that Talk: There is a far stronger required, to wit, some nitrous Spirit of Salt, or Spirit of Nitre acuated with common Salt. When the extraction is ended there may be gathered plenty of Nitre out of the remaining Menstruum. Insomuch that there is nothing else required but labour, for the costs expended on the work are not at all considerable: And thus in a little space of time, we may get a great quantity of Copper and *Sol*.

After the same manner as we have shown that it is a thing possible to extract Volatile *Sol* by the help of Salt-petre out of such a disregarded Talk and other Stones, and to make it fixt, so we can also extract the same out of several other Minerals, that are plentifully enough lying on both sides of the *Mhene*. So that now, no body hath any ground to say that the Ores cannot be found in this or that Country, or such convenient Minerals, as out of which we may extract the volatile and also the ripe Gold acording to *Glauber*'s prescription.

If now such may be found in those places that are adjacent to the *Mhene*, which we always judged to be void of such treasures, what shall we not find in those places, which have already yielded us various kinds of Metals for some hundreds of years successively, and do yet daily exhibit them; such as are *Hassia*, the Dukedom of *Brunswick*, *Saxony*, *Thuringia*, *Moravia*, *Bohemia*, *Hungary*, and that such like parts of the Earth abound with Metals. Therefore, Friendly Reader, do not thou perswade thy self that there is any place in which we are not able to extract many good things out of the Earth.

I have likewise found various Metals in our *Holland*, and yet never, did any one ever hear that there was the least particle of them therein found, especially in that place that they call *Velauw*; yet notwithstanding it yields Veins of Iron, and a Yellow Sand which hath in it ☽ & ☉.

Neither doth that, place afford only such Sand Stones, & Earth, out of which volatile ☉ & ☽ may be extracted, but withal there offer themselves at the Sea-shore in those Sand-hills, which the *Hollanders* call *Duynen*, which the stony Sea heaps up, Stones of a Sky colour, which contain ♀. They are called by the *Hollanders*, *Ultramarine*.

In this place, is likewise gathered plenty of Ostiocolla it is about the length and thickness of ones Finger; yea and sometimes is as big as ones Arm; and as in a clear Season it is easily noted, (or met with) so in a Rainy Season it is not to be seen: It is in some sort hollowed in the inside; it is of a white colour, like stone-lime, and thereupon the Chyrurgions use it to consolidate the broken bones of their Patients.

Some (as they have related to me) have extracted ☽ thereout-of. There is not therefore, any place that does not contain some Metal, and especially ☉ and ☽.

Thus Friendly Reader, you see that there are in all parts of the Earth, such Subjects, as do contain, if not fixt, yet at least wise volatile Gold; insomuch that no body may on good ground, complain that nature hath denyed him ☉ and ☽, so he but knows how, and be willing to extract it.

Did *Germany* but know those Treasures which the Earth contains, and did use them aright; certainly they need not give place to the power of any Monarch. But it seems as if God had cast a blindness

upon men, or at least keeps them blind, even until the due time approacheth of helping those that are his.

I have here shewn the way for the Country to get riches and power by; but as concerning the way by which we may extract both the volatile and fixt Gold out of Stones, Sand, and Clay, without any considerable labour & costs, according to this invention of mine; I will shew it in my Laboratory, which by Gods permission, I have begun to erect for the sake of Friends.

But whereas I have omitted some words in the description of this invention; you are to know that it was done upon this account; least otherwise such a noble Artifice should fall into the hands of my enemies; I will never be wanting to illustrate (or explain) such things as are somewhat more obscure, unto my friends. The main things are delivered clear enough, to such as are in any measure skill'd in Chymistry, but the unskilful may not hope for any thing else (thereby) but labour in vain. The thing in it self is easie, and without rubs, so as that any one who hath but once seen the way, may understand it, and manage it.

I could have exhibited the things I have delivered, in a briefer stile, but upon consideration of the common good I would not; he that cannot from these things perceive and learn ought, let him think that God is not willing to vouchsafe him the Grace of understanding them.

And now, if I had been minded to have exalted this work with mighty praises, I should not have done unseemly at all, for as much as this labour shines even in the dark, and makes many doubtful things firm and clear.

For by the means of this labour, we may get us, not only abundance of ☉ and ☽ very easily, but likewise most excellent medicaments, and which are not to be accompted common; nay, even the off-drawn Salt-petre it self, is a most excellent medicine for all Vegetables, because it is capable of multiplying them abundantly, in so much that he who is skilful in this kind of work and does not forbear from setting about it, will never want any thing.

What greater things can a man desire from God, than a sound Body, daily Bread, and as much ☉ & ☽ as necessity requires? now these gifts of God do abundantly flow in upon us by this labour; if it were not for the wicked Farnnerianists who are not worthy of any good thing, and do contemn every thing that they understand not, and (so consequently) restrain me from treating of these things, with any longer and clearer discourse. The whole world would be amazed to see the so exceedingly easie method of bettering of the Metals, and of making them perfect, and which method but few there are that know. But whatsoever we have omited here, shall, God willing, be shortly delivered in my work of ♄, where we will demonstrate by what means ☉ and ☽ may be extracted with exceeding profit out of vile (or common Lead, so that we need not any other Subject, but Lead and the Salt of the Earth or a Mineral fire (by whose help, nature bringeth (or advanceth) all Metals to maturity) for the performing this work; and hence the word Alchymy (which signifies nothing else but the melting of Salt) seems to have taken its original.

He therefore that knows how by the help of Salt, to make Metals volatile, and again fixt (which is not

to be done but by solution and coagulation) such an one knows the true and unsophistcate Alchimy, and follows the universal exhortion of the Philosophers, where they say, *Make the fixt Volatile & the Volatile fixt, Dissolve & Coagulate*, &c.

He that hath in any measure meddled with Saltpetre, easily perceives what my meaning here is, and what I drive at. He whom Nitre obeys, him do all things else obey. I have determined (by God's permission) to erect a Tryumphant Chariot for Nitre, & to set it thereupon, as the greatest Monarch of the Word & to exhibit it to the ignorant.

Whereas now I had written down this most noble way of compendiously extracting volatile and fixt Gold out of Stones, Sands, and Earths, and of farther augmenting other ☉ and ☽ thereby, I found nothing pretermitted of what may any waies help to the profitably accomplishing the Work, save this, *viz.* Whence such aureous Subjects are to be taken, out of which we may extract volatile and fixed *Sol*; or by what means they (*viz.* ☉ and ☽) may be prepared by such like labour in great quantity.

To satisfie such as these I neither will, nor can deferr it. So then, as touching the Golden Materials, there hath been enough shewn already to prove that they are every where to be found, and put case there were none to be found, is there not a Golden Silver every where to be found, and that Silver may be separated from the Gold, be Cemented, and again made aureous, as often as one shall please. Yea, and Gold may be profitably extracted out of a certain (sort of) Tin, especially the *Geyersbergick* and so likewise out of some Iron too.

Now that such, (*viz.* Gold) may be made in great quantity we may dissolve the ☉ that sticks in Stones,

with Spirit of Salt, acuated with a little quantity of Nitre; for such a spirit will not be so costly as Nitrous water is. and besides this too, it will (after it hath been used in the said separation) yield excellent Saltpetre, of full as much price and value as the Spirit of Salt it self was of. So that by this means we may extract the ☉ without those costs (too): And this moist extraction may be excellently well performed in a Vaporous *Balneo*.

But if we seek after the dry way (of doing it) then the Stones are to be mixt with Salt and a fourth part of Nitre, and being mixt are to be made up into little balls by the help of some fat Earth, so as to stick together: Then are they to be dried in a peculiar Furnace, or else even in the open field, with a Fire of Wood, the which may be done in one hours time. The Cementation being made, they are to be powdered, and out of the powder is a Lixivium to be extracted by the means of Water, and you shall have the ☉ permixt with the Lixivium, which is to be thence extracted by the help of the solution of ♄, out of the Lixivium may Nitre be afterwards made. And now by this means may a most easie and no ways costly operation at all, be instituted with some hundreds weight.

But as concerning the melting and reduction of the ♄ which contains in it the ☉ which it caught, it may easily be done, but 'tis by the benefit of a* ***Mentioned in the Second*** **Century.** peculiar* Tigil or Pot, the making of which is known only unto my self; which said Tigil or Crucible lasts a long time, and doth not at all let any thing of what is thereunto put, run out, because it has its cover made of the Lute of Wisdom.

But now again here may arise another doubt, and it may be demanded, how we may have so much

Spirit of Salt for the moist way, or so much Salt and Nitre for the dry way, as is requisite to make this extraction of the Metals. Salt-petre is chargeable, and the Spirit of Salt will be difficultly gotten in such plenty; and haply they will stand us in more than the Gold thereby extracted would be worth? To such I answer, It is not so precisely necessary to buy Salt-petre for this work, seeing that the said dissolvent when it hath done what you would have it, both in the dry and moist preparation, may be again turned by the help of common Salt and other mean Subjects, into excellent Nitre: so as we may thence have more Nitre, than it was afore. And farther, as concerning the Spirit of Salt it may be made in great plenty, insomuch that (by the benefit of one Furnace) there may be daily made 50, 60, 70, yea 100 pounds thereof, and out of every pound of Salt may you extract a whole pound of rectified Spirit of Salt with the help of two or three pounds of Coals: So that, that Spirit will in a manner cost nothing at all save Salt and Coals, which doth again after it hath been put to its appointed use, yield more Nitre than the Salt and Coals cost. This operation therefore may be done without any costs as it were. The things I here mention are true, although I well know that scarce one of a hundred will believe what I say; however I matter it not, but it is sufficient to me that I know these things, and can exhibit (or demonstrate) them to any Friends.

Albeit that this be a most easie Labour and of no expences to extract volatile and fixt Gold out of Ores, Sand, Clay, according to the prescribed rule; yet I question not but that many men that are given to slothfulness will desire here, a yet easier way, whereby they may heap up a great deal of Gold without any trouble at all. To such as these, I verily

could shew an easier way of extracting ☉ out of the Minerals without melting, did I not count it wholly an unbeseeming thing, to detect all these secrets both to Friends and Enemies alike without any distinction. I will not be at all wanting to communicate my more secret way to those who deserve well, & thankfully acknowledge towards me and mine, the benefit they have received.

But yet, that the knack may be in some sort manifested, and it may be somewhat known by what means ☉ and ☽ may be gotten even out of the Ores and Minerals themselves, I will a little stretch out the thred of my discourse, and will in some sort delineate the very work it self.

You are therefore to know, that all those Minerals which contain fluxile (or unripe) or volatile Gold, whether they be stony or not, do for the most part contain in them some Iron: Now then, when a man would thence extract the ☉ by the Spirit of Salt, it cannot be but that together therewith the Iron would be dissolved too, to the doing of which there is much spirit required: And albeit you may make the said spirit most easily according to the way by me delivered, yea and may besides, by the addition of some even the most mean matter again make excellent Nitre, so as that the Nitre thence extracted shall be of more value, than the costs expended about the operation; yet notwithstanding, this business is not void of all kind of labour and trouble, and it requires diligent men (not drones) of which sort there's more scarcity than plenty. But now this which we treat of at present, may a beardless Country Boy of about some 10 or 12 years old perform: It requires but little Fire, and all the (Metals) may be extracted in great plenty. Which to

do, you must know that where the Metals (or Ores) are sulphureous, that *Sulphur* must be taken away by the force of the fire, for else the Spirit of Salt leaves all untoucht.

NB. However it is your best way not to force away by the fires violence the *Sulphur* out of the goldenish Flints, because that so, there goes off part of the Spiritual ☉: but rather extract every such aureous *Sulphur* with a strong Lixivium made of fixt Nitre, and precipitate it with ☿ dissolved, and so the aureous *Sulphur* goes to the bottom, and is to be edulcorated, and ♄, ♀, or ☽ is to be thereto added, and so they will seize upon the volatile (Gold) and the ☉ is by the means of the Lixivium made in some sort fixt, and is to be separated by destilling of the ☿: The edulcorating waters do again yield Nitre. So that the extraction requires no costs at all, at leastwise but very little.

NB. When we have extracted the aureous *Sulphur* (by the help of fixt Nitre, or some other very strong Lee of Wood-ashes,) out of the Flints, and have precipitated it with the solution of the ☿, and edulcorated it, and sublimed it by a Retort, there is thence made an elegant (or delicate) Cinnabar, which by the addition of the filings of Silver may be changed (by Cementation) into fixt ☽ which ☽ is aureous, by reason of the volatile ☉, which was permixt with the *Sulphur*. Whereas otherwise, other Cinnabar is by this way (of proceeding) wont to yield only ☽: For the filings of the ☽ thereto added, become volatile, and vanish away into the Air, for the Cinnabar hath extracted the soul thereout-of, and hath by it made it self fixt; so that there redounds no profit at all thence-from, save only that the possibility of nature is laid open. But now when the

Cinnabar of this place (or mentioned in this place) is mixed with fusile ☽, edulcorated and precipitated with Salt, or with the Calx of ♄, either alone or else both mixt together (*viz.* the ☽ and ♄) they do greedily betake themselves into each other, and there ariseth thencefrom a black stone, which being kept in an apt (or suitable) Fire by degrees, and that for a due time, doth daily more and more acquire a fixity: Yet do I believe that it needs a long time, to make it wholly fixt: which thing seeing I have not as yet any experience of, I will not here mention ought of certainty concerning it, perhaps some particular Tincture may thence be extracted, because that the subjects which constitute it are excellent ones, for as *Sulphur* is said to be the Father of all the Metals, so is ☿ called the Mother. What may not a burning *Sulphur* not unlike the common Mineral *Sulphur* that is in all Metals, be extracted by Art out of any Vegetable? which (said *Sulphur*) I have implanted in mercurial subjects more than once, and have fixed it in them; yea and by the help thereof have so extracted natural Gold thence-from.

Verily it is to be wondred at, that this science or skill hath been hitherto unknown to the Inhabitants of the world, and that no body hath commited the same to writing.

But indeed all men may cease to admire, when they shall consider that the Great and Blessed God bestows his gifts, and the knowledge of Nature to such only as it Pleaseth him, *viz.* to such as bear an humble, and pious Mind; and contrariwise denyeth them to such as are impious and proud.

And here falls in a thing highly needfull to be known; by him especially, who would effect ought in Chimistry with profit (and that is this, *viz.*) That

there can be no bettering of the Metals at all (be it either in the universal or in a particular way) but by the benefit of *Sulphur* (which is the father of all the Metals) & this both in the moist and in the dry way. (NB. The Spirits of Salt, of Nitre, Vitriol and Sulphur, serve instead of a sulphur though a moist one, and perform their office in the moist way.)

If therefore all the Metals were at first a *Sulphur* (for no Metal is there wherein it may not be found, and besides too, it is known to be in all the Vegetables) by what means possibly can it be, but that being by the help of a Sulphur, Salt, and apt Fire, reduced to fixity, it (*viz.* any Metal) should yield good ☉ seeing that it (*viz.* Gold) is nothing else but a fixt pure *Sulphur*. But for as much as *Sulphur* (as being of the Masculine kind) cannot produce any Metal alone, but that there must necessarily be ☿ thereto adjoined, (as being of the Feminine kind); every one is bound to seek after an apt or suitable ☿ (as being the Female) for his *Sulphur* (as being the Male) and to join that ☿ to this *Sulphur*, and let these two celebrate their Nuptials in Hell, where *Vulcan* is President.

Now then, when the Agent hath acted on the Patient, and perfected the operation, whether by the moist or by the dry way, it shews it self to be a pure product, and so much the purer too, by how much the Agent and Patient were more or less pure.

When we sow fruitful Seed in a fat Soil, good Fruits do thence-from proceed. Now then let *Sulphur* be the seed there, and ☿ the field it self, yet so as that your *Sulphur* (or seed) be pure, and that the ☿ (or ground) have no Tares in it; but let it be duely endued (or dungd) with Salt, and so let it have the fruition of the solar beams, and patiently wait for the

thence proceeding fruits. Now if you meet with such a subject as hath both *Sulphur* and ☿ already joined together by nature; you are there only to begin the operation where nature left off, and so by the help of Fire and Salt, bring it unto its due perfection, which nature was constrained *nolens volens* to leave imperfect, by reason of the defect of Salt and fire.

I could here present the Student of *Hermetick* medicine, with such a foundation, as out of which abundance of commodious conveniencies might be expected; but the ingratitude of the men of this Age, prohibits the divulging such things.

Therefore do I herein follow *Paracelsus*, who saith, *We could verily lay open most mighty Arcana in a very few words, if it seemed good unto God to grant unto all men the same* (equity of) *Riches*.

Turn over and over his Writings, Reader; and thou wilt easily attain the foundation of the truth; but especially, view well such writings as he hath left us concerning *Sulphur* and *Vitriol*, which we will here rehearse in this place (because of the affinity of the matter) for thy sake and benefit, which writings of his if any one can make nothing of, verily neither will he understand those things which we shall add.

And now are all things (requisite) sufficiently laid open to such, to whom God vouchsafes his blessing; and contrariwise, the same will always remain hidden and unknown to the impious.

Thus much I add (*viz.*) That neither can any Tincture be obtained without *Sulphur*, nor any *Sulphur* fixt without Salt; both these now are found conjoined in Vitriol, from which the noxious superfluity is to be separated, and the pure is to be made fixt.

Now follow Paracelsus *his words, concerning* SULPHUR *and* VITRIOL.

I will present unto you, as one well skill'd, my experience in all respects concerning Sulphur, viz. *what is contained in Sulphur, both as to Medicine and Alchimy, and to other things, and unless God be against it and hinder, the operations of* Sulphur *are so stupendious and admirable, that the natural Light in man cannot enough admire them. Now if God himself doth not hinder, then the defect is in the workmen, that so handles the* Sulphur *as that the operation answers not to the implanted Virtue.*

Now seeing that every babling fellow is a Physician*, and every prater an* Alchymist*, this is the cause why (in plain Terms) the Sciences (of* Physick *and* Chimistry*) cannot be brought to light.*

This now is the Foundation or Basis, viz. *That in* Sulphur *are contained such great Arcana and Virtues relating to both Faculties (viz.* Medicine *and* Alchimy*) that no body can ever search them out sufficiently: I say, that there lies such excellent Virtues hidden therein, as may very deservedly cause in all Men great admiration. For after long experience gained in both Faculties, such are the Virtues of* Sulphur *found and known to be, that there are not many other things that are either its superiour, or which may therewithal compare in* Medicine *and* Alchimy.

Sulphur *reproves* Aristotle*, when as he saith that the species of things cannot be changed: For* Sulphur *is transmuted; did* Aristotle *live now adays he would wholly be ashamed and blush.*

Thus far he, as for the many more additions that he makes every one may read them in his Works.

As concerning my self, I say thus, That nothing at all can be done in Alchimy without *Sulphur* or

sulphureous Salts; like as without seed, neither Vegetable nor Animal can; as is clearly evident, be possibly generated. *Sulphur* is instead of Seed, and *Mercury* instead of a Matrix: But you must not think that I do here speak of common *Sulphur* only, and common *Mercury*: [No!] I do comprise under them such as are far more excellent, and this you are well to heed. If now a metal be not sulphureous, it must be brought to a due softness by the force of Fire, which is done thus, *viz.* Making it red hot and quenching it some times in water. But if so be it is already soft enough, then bare powdering it is sufficient, without so much as ever heating it red hot and quenching the same. Put this powder in Pans of cast Iron, and that there may be the less waste of Fire, let it be encompassed with a wall or mured in a Furnace; fill them half full, and pour thereupon (whether it be Metal or Ore, or Sand, Stone, or Clay, or golden Mineral,) so much of the water which we shall by and by describe, as the Iron Vessel can contain, yet so that the said Vessels want of being top full the breadth of 3 or 4 fingers, least as you stirr it about some of it spil over. This done, put to an hundred pound weight of the Metal or Ore, about one pound of an aureous, silvery, *Magnet*. Then put Fire under the Pans or Cauldrons, and make the water boil, continually stirring the matter contained in the Iron Pans, with an Iron *Spatula*.

Now forasmuch as this water is of such a quality as that it can neither dissolve ☉ nor ☽, it leaves both the ☉ and ☽, and by reason of the admixtion of the *Magnet*, it attracts only the Iron or the Copper. When the water hath attracted as much ♂ or ♀ as it can, it is to be drawn away, and more new put on in the room thereof, and you must proceed on to boiling as afore-mentioned, and thus are you to reiterate this

work, until all the ♂ or ♀ shall be extracted out of the Metal, and nothing remain behind save a dead Sand, which may most easily be separated from the *Magnet*, by the pouring on of common Water, for the sand mixeth in self with it, and the *Magnet* remains pure in the bottom of the Vessel, which hath received into it self the ☉ and ☽: This ☉ now and ☽ is again easily separated from the *Magnet*, which said *Magnet* may be again used for such another work.

Thus now, one only person can by this means daily separate a great quantity of Metal from the ☉ and ☽ it has in it; all the artifice consisteth in the preparation of such a water as extracteth ♂ and ♀ out of the Metals or Ores: And therefore must it be of such a nature, as to dissolve neither ☉ nor ☽, & be nevertheless strong enough to dissolve ♂ & ♀ and to separate them from the ☉: For that the *Magnet* cannot extract the ☉ out of the ♂ and ♀ unless they be afore dissolved. But as touching the quality (or composition) of this water; 'tis no ways expedient to divulge it, forasmuch as the whole business dependeth thereupon, nor can any thing at all be effected without the knowledge thereof. When now *Venus* and *Mars*, or else *Venus* alone, or *Mars* alone, are extracted out of the stone (or ore) by the benefit of the said water, the precipitation of them may be made by the addition of some contrary thing, whereby it comes to pass, that not only its sharpness is taken away but also excellent Nitre may be thence prepared afterwards, which is to be separated from the *Mars* or *Venus*: The precipitated *Mars* may be reduced with a strong fire, and so it will be made fluxile, and which easily melts in a Crucible like *Venus*, and becomes malleable; yea, and of more worth than the best *Venus*, because it performs very many profitable things in Alchimy, which we forbear

to speak of here, for some certain reason.

He therefore that knows such a menstruum or dissolvent, and which requires no costs to make it, and yet notwithstanding doth very well dissolve *Mars* and *Venus* (and leave the *Sol* and *Luna*): Such an one verily may in all places find plenty of *Mars* and *Jupiter* (*Venus* I believe he means) which contains plenty of both fixt and volatile *Sol* and *Luna*: neither need he be much sollicitous about Golden Metals or Ores.

Forasmuch then as the whole Artifice consisteth in the knowledge only of the water, and in the manuals (or contriving) of the placing of the *Magnet,* and in the separating all the unprofitable matters from the ☉ and ☽; he that does not know such a *Magnet* and how to prepare such a dissolvent, by whose help ☉ and ☽ may be concentrated, and ♀ and ♂ be separated from them, let him search hereafter even as I, my self have done: But if so be he cannot find out or invent either of them, let him get from me what he desires to know, and I will not omit to satisfy his request, provided it may be done without my detriment and disquiet. But now you must not think that therefore I will give answers to all such as trouble me with their tedious Letters, for my time permits not the doing of such matters.

There is yet another way by which we may expect profit out of such Minerals as contain in them much ♂ if we deal with them on this wise. Let it be reduced with the strong blast of bellows, and you shall find either a greater or lesser *Regulus* in the bottom (according to the muchness or lessness of the ♂ that the stone contains) which *Regulus* compriseth in it self the ☉ and ☽ which was in the Mineral or Ore, if such an Iron be malleable, Plates may be

made of those *Regulusses*, with are to be dissolved (in the Cauldrons made of cast Iron) with that secret water, out of which solution, the ☉ may be extracted by the benefit of the *Magnet*, according to the afore-prescribed manner. But if the said *Regulus* be brittle, and not malleable, then may it be granulated: Nay, it would not be much amiss to make large Cauldrons and such like Pots thereof by melting, that may be of 2, 3, or 4 Fingers thickness. Nor must we suppose that what the said water dissolves of the Cauldron and takes from it, besides that which it receives from the Plates or Granulated Iron put therein to dissolve, is meerly lost: No, for even it doth in like manner exhibit its *Sol* too; so that by this means a most rich Mine-pit may be made.

But some will say, whence shall we have such Minerals that yield ☉, and that bring such great profit? We have said before, that such Minerals or Ores containing such Iron, are every where to be found: Nor can you light on any common ♂ which has not ☉ therein, which may easily be extracted from thence, and that with most great profit. This now is known unto most (Refiners) that there is plenty of corporeal ☉ to be found in the Iron that we commonly use which (said corporeal ☉) is far surmounted (as to quantity) by the volatile ☉; but if a man would separate it thence by the help of fusion and the addition of ♄, it requires too much costs, and therefore men never attempted any other way of extracting it.

All *Germany* affords this sort of Iron (that is thus endued with Gold) in a most plentiful manner, & I could shew very many places in which it may be found, if some pregnant (or notable) causes did not prohibit me from so doing.

But that all men may know, that I tell the very truth, and do not like a vain man tell you of great Treasures, and that they are every where to be found in *Germany*, and yet notwithstanding by reason of their not being known are not of any use; I will show some of them with my very Fingers as it were, which haply in respect of othersome that I know not of as yet, will be but a very few, and these very vile or poor, too.

First of all then, all the Iron that is in the Pine-bearing Mountain and about it, doth contain both fixt and volatile ☉; and this I have often experienced some years since, when I lived at *Kitzing* in *Franconia*, and extracted thence from by the help of a melting Fire excellent ☉: For as then, the manner of extracting ☉ from thence by waters only, without any melting fire, was to me unknown: For at that time those most eminent Men Mr. *Christopher Herbst*, the chief Physician of the Prince of *Arsparch*, and Mr. *Adam Renningen* the said Prince's Lieutenant, and chief of his House, (or Governour) in the Castle of *Blassenburg* near *Culmbach*, presented me various kinds of minerals, to try what was in them contained: And amongst these Iron ones I find all of them to be endued with Gold, which might be exceeding profitably extracted thence by the afore-disclosed moist way. There were likewise given me such like conditioned stones and metals (or ores) which were found near *Bamberg*, of which we have said somewhat afore. The truth of this thing is the more confirmed by the Lord *Fleishman*, Governour of the Province of *Bamberg* my singular Friend, who wrote unto me some few months since, that an excellent Gold-mine is found in the Province of *Bamberg*, but yet that the Gold thereof cannot at all be separated from the Iron by the force of Fire; which volatility of

Sol I signified to him in my answer might most easily be amended.

Now like as all the Minerals and the Iron it self which are found near the Pine-bearing Mountain, are very much endued with Gold, so those which are found in *Misnia*, *Saxony*, *Thuringia*, and *Bohemia*, do abound with ☽: both of which may be extracted thence by the way by me delivered, with very great profit. I know by good experience that in the *Hungarian* ☉ and ☽ Mine-pits much volatile Gold and Silver is forced away into the Air through meer ignorance.

Certain I am, that the Metals (or Ores) throughout all *Carinthia* and *Styria* do possess much volatile and fixt Gold; especially the Iron Metal (or Ore): For I have many a time made experiments of that thing.

Moreover, the *Hircinian* Wood, *Brunswick*, and *Hassia* yield such kind of Minerals. Nor is *Suevia* destitute of such Iron as is impregnate with ☉; and amongst other things I think good to declare, that some few months since, a certain *Basilian* Ruler sent me a potion of such kind of Iron; withal relating, that the lesser experiment did there yield ten Crowns of Gold, and that an hundred weight was of this Iron sold for nine *Florins* price. Which Iron when I had tried by the help of a fusing or melting Fire I got a sufficiently great quantity of ☉, but in proceeding by my moist way, I got twice or thrice as much.

Such kinds of stones as these are found in plenty throughout all *Germany*, to which may be reckoned the red and black Talk, the Irony Talk, black and red *Granates*, *Smiris*, *Hæmatites*, and the like, which always are endued with ☉, if not with fixt, yet with volatile Gold. So that now it is manifestly apparent, that in those places where ☉ is digged, all the stones

are repleat with volatile Gold at least, if not with fixt ☉ too: like as all the Iron that is digged in *Spain* doth of a certainty besides volatile Gold contain also corporeal Gold. Nay more, there are not only found such stones that have Gold in them in those hotter places, but also in most cold places too, witness *Norway*; where you may meet with whole Mountains consisting of Iron, Talk, and Granates; out of which there has not hitherto been any ☉ gotten by the help of a melting fire with any profit; though I my self have found ☉, in the lesser experiments.

Last year Mr. *J. W.* brought me various Ores out of the County of *Eysfeldein*, that I might try what they contained. Amongst others, there were some little grains of Iron round like a Pease, though somewhat lesser, thus generated in the Earth naturally: This Earth as I was informed, is altogether black, one handful of which contains 10, 15, 20 Grains: wherefore it is not improbable that all the Earth of that place is repleat with Iron; these little Grains are so very tractable, as that they may be made into Plates with an Hammer, and contain much Gold.

Such a kind as this of black Iron grains (yet not so round or tractable as those but now spoken of) were brought me from *Saxony*, which are endued with plenty of Gold, but volatile; they are easily pulverisable, and (as was related to me) are to be found near the Mountain which the *Germans* call *Geyersberg*, where also is gathered a Tin stone, which doth also contain Gold, such as *Misnia* yields more plentifully. Out of 100 weight of this Tin, I found that 10 or 12 Crowns of Gold might indeed be extracted; but this work requires such costs as far exceed the price of that which is extracted: and therefore they sell off the Tin, just as 'tis digged out,

to avoid the expence of extracting the ☉.

That which is gathered in the said Mountain, I have often tried, nor did I ever find it destitute of ☉, the which may be very well extracted by my moist separation.

The *Stabelein* Abbot presented me with such like Iron stones and several others that had Gold in them, together with diverse Minerals, some 18 months ago, some of which were gathered in *Westphalia*, some in the Province *Luttinge*, in that part that is under the Government of the Elector of *Cologne*, *P. M.* The Prince himself having a mind to see by what means I would extract the volatile Gold out of them, came unto me, but he died in his Journey homewards; since that I have not received any more of such like aureous Metals (or Ores.)

Amongst other (Ores) I knew an Iron Metal (or Ore) found in *Westphalia*, the half whereof was very aureous, but of no use, because the Metal-men were ignorant of the way of separating those Metals from one another; whereas notwithstanding both the pure Copper, and the ☉ it self may be most easily separated from the Iron according to the way by me delivered.

There were also a while ago several Iron stones brought me by the *Cologne* Merchants, and especially Mr. *Peter Sevet* (*P. M.*) which are found in plenty in the Mountains, and do abound with much ☉: Besides this too, all the Mountains of *Germany*, do yield a yellow Earth, endued with Iron and ☽: of which kind a certain Physician of *Erfurt* sent me some, which (as he related to me) at *Eysfeldt* near *Erfurt* towards the Province of *Moguntia* is plenty thereof.

Such an Earth containing silver, I my self found

here in the bordering places 'twixt *Arnheim* and *Embrick*, but not of such worth as that of *Eysfeldt* is.

Who knows but that that same place which we call *Velaw* hides in it vast Treasures. For I have found near *Amheim* a white Clay and Earth out of which I extracted some ☽: Yea and I found there too, true Veins of Iron, which whether or no they contain ☉ and ☽ I cannot tell: For I never proved them, but the first opportunity I have I intend (God willing) to make an Essay.

Thus 'tis evident that there is not at all wanting unto us the matter of effecting some good and profitable thing by, but the love of idleness is the reason why we neglect abundance of sufficiently obvious Treasures.

The Earth nourisheth men of diverse natures; for some of them are altogether slothful, sluggish, and extraordinarily backward to labour, and yet nevertheless get fat bodies enough: On the other hand, there are some who are very diligent, & do too much consume themselves, and concerning whom (being like unto a burning Candle) they may say thus of themselves, *by serving others, am I consumed*. And as much benefit as the Candle gets by affording a light unto others and by consuming it self; so much doth there redound, especially from ungrateful men, to a diligent man who by serving others wasts and consumes himself.

These and such like most abject Subjects are plentifully enough to be found in all parts of the World where Mountains are, and out of them may you extract ☽ and ☉ by the help of my nitrous Water, were but the way of doing it known, which way hath been hitherto reserved amongst *Arcana* by reason of mens extream ingratitude. And I pray is it not

altogether useful and expedient that we should gather such Treasures, and make use of them to Gods Honour, and to the defence of Kingdoms and Mankind? Is there not sufficient store of idle fellows, whom it would be very expedient either to invite to labour or (if they shun work) to banish them the Kingdom?

I believe that this blindness will hardly leave men afore they are reduced to straits, but beware least you hap to begin to grow wise too late.

This work, like as is every other perfection of Metals is done by Sympathy and Antipathy: For that, dissolvent which drives off ☉ and ☽ from it self, by Antipathy, all this doth a mercurial *Magnet* greedily attract by Sympathy, seeing it thus, that *viz.* as like loves like, and draws it to it self; so one contrary hates another contrary, and drives it away.

Two contraries do always produce a third thing. Where the Agent acts upon the patient, and that this patient is even enforced to suffer against its will, and cannot by any means shun the force of the Agent, there must of necessity arise some better product from them.

When water is added to water, neither of them suffer, because they are both of them of the same nature: But when fire and water are joined together, the weaker is the sufferer, and from them doth a third thing proceed.

The stinking and volatile *Sulphur* is the enemy of ☉, and common Salt, of ☽; and by how much these have more stench the one, and sharpness the other, so much the greater is the hostility they shew. The greatest matters are performed by love and hatred; such things as are friendly beget a chearfulness, joy,

and vivacity: Whereas, on the other hand, the things that we abhor beget a teadious wearisomeness, grief and death: therefore the more acceptable a thing is, the more it brings of life; the less acceptable the more of dolour doth it bring. All the perfection therefore of the baser metals consisteth only in Antipathy and Sympathy: And if once we do but rightly know the nature of metals, all things are easily accomplished.

It is storied of a certain Philosopher in *Italy*, That he had committed some evil deed, for the which he was accused, apprehended, and cast into prison, being here shut up, he could not be brought, neither by entreaties, nor by threats; no, nor by any means to confess his fact; but at last they put into his company a man of no sobriety or modesty at all, who did so grieviously exasperate him with his words, that the said Philosopher could not brook it, and so rather chose death; for he affirmed, that the mind of man was far more noble, than to be plagued by such a tag-rag, with reproachful contumelies.

Even just so is it with Metals, by how much the nobler and purer they are, so much the less will they commix themselves with impure things.

Gold the purest of the Metals cannot be knit with stinking impure and common *Sulphur*; for there is an antipathy betwixt them. Salt alone is endued with those virtues as to be able to reduce contrary natures into agreement, and to commix them; and being commixt, the fixt ☉ is able to make the unfixt *Sulphur*, like unto it self in respect of fixity, whereas otherwise they always persecute each other with hatred. *Sol* cannot suffer any thing until it has gotten the nature of a Salt, and then may it be tormented (as it were) by the impure *Sulphur*, and be changed

into better.

When the Soul of the imperfect Metals (which is a spiritual ☉) is to be forcibly pluckt, and severed from its body, it cannot possibly be done without the dolour or pain of the Patient; for where the pure and spirituous goldenish substance that dwelleth in the corruptible bodies, is to be made Corporeal, and consequently assume a more noble form, the first form must necessarily be annihilated, that so the hidden tender body may come forth to light and be seen.

And this verily is done by another kind of way than the common and already known; by which (said common way) the Metals are separated by *Aqua-fortis* from one another, and are afterwards Molten. For if any one should make one Metalline Mass of ♂, ♀, ♃, ☉, and ☽, by melting, and then would again separate them, by the help of common *Aqua-fortis*, he would effect nothing; for the *Aqua-fortis* would dissolve only ☽ and ♀ and part of ♃ and ♂, and leave the remainder with the ☉ undissolved; or if he should pour on *Aqua-regia*, there would be only ☉ and ♀, together with some part of ♃ and ♂ dissolved, and that which remains of the ♃ and ♂ (undissolved) would be left behind with the ☽, and so there would not be made any good separation.

But if so be that any one has a mind to attempt this thing on this wise, and should say, I will dissolve ♂, ♀, or ♃, by the help of *Aqua-fortis*, or as much of it as possibly I can, for so the ☽ that is in the mixture must needs be dissolved. Now then when its dissolved I will precipitate it (*viz.* the ☽ out of the solution, by salt water (if it be so yet); the ☉ therefore remains, which could not be dissolved by the *Aqua-fortis*; or, if I should dissolve the Metal (or

mixture,) by *Aquaregia*, then the ☉ is dissolved, (but not the ☽), and so I can precipitate the ☉ out of the solution, by a Lixivium, and edulcorate it, and melt it, and so by this means may I get it. Well (let me tell you) that neither will this way fadge, for these Metals, and especially ♂ and ♃ are too terrestrial, and admit not of such a separation, though there should be in the aforesaid Metals, abundance of Corporeal ☉ and ☽, whereas notwithstanding the greatest part is fluxile, and must be again made fixt and corporeal by solution; for in this work the already pure and fixt ☉ and ☽ may be altered, so as that a Mercurial magnet cannot be able to assume them. As for example, Take you a Metal, as ♂, ♃, or ♀, which (as is well known) there is Corporeal ☉. Dissolve this in *Aqua-regia*, and precipitate the ☉ by a Lixivium of fixt Salt; boil this precipitate with ☿, and see if that precipitated ☉ will pass into the ☿; you'll find not, for this ☉ hath gotten a Crust (as it were) in its precipitation by the Lixivium; that is, it is environed with a saline Terrestreity, in so much that the ☿ cannot attract the ☉.

Neither likewise can ☿ attract or assume such a silvery Calx as is precipitated out of the solution with salt water, and that by reason of the terrestreity alone, which adheres thereunto by means of the precipitation, by which it is altered and deprived of a pure Metallick form.

The truth hereof may you easily experiment, on this wise. Dissolve a particle of pure ☽ in *Aqua-fortis*, and dissolve the same quantity of pure ☉ in *Aqua-regia*, precipitate the ☽ with salt water, and the ☉ with a Lixivium, so as that the ☽ be precipitated into a white, and the ☉ into a yellow Calx; edulcorate both Calxes apart after the best way that possibly

you can, with hot water many times, so long till the edulcorating water be wholly sweet, then weigh these dryed Calxes, and you shall see that the ☽ and ☉ you took, are one fourth part heavier than before the solution of them; and this is to be ascribed to the Salts only, that have adjoined themselves to the Metal in the precipitation, and cannot be thence seperated by edulcoration; and therefore such a silvery Calx yields not (when molten,) a pure Lunar body, but a certain Ashy coloured Mass, fluxile and volatile, by reason of the Salts; and this Calx is not changed (or swallowed up) into the ☿ neithar before nor after its being molten, nor (after its melting,) can it ever be dissolved by *Aqua-fortis* or *Aqua-regia*, which alteration proceeds meerly from the Salts that have adjoined themselves thereto in the precipitation.

Even just so is it with such a golden Calx, which being separated by precipitation out of the *Aqua-regia* with a Lixivium, will not have ingress into ☿, by reason of the impurities that accompany it; and therefore this golden Calx (when it is made hot) kindles, and vehemently operateth upon it self, and this is meerly from the Salts.

From hence it is clearly evident that the Calx of ☽ precipitated by Salt, and the Calx of ☉ by a Lixivium, have not any communion with ☿, how then can such a Calx, which is (now) at first forced out from many terrestrial parts, and imperfect Metals, and separated from them, have a greater communion therewithal, have ingress thereinto, and conjoin it self therewith by digesting. Other wayes therefore must be taken, by which you may extract the volatile and fixt Gold, that lies hidden in ♂, ♃, ♄, or ♀: Now many there be who do in vain search into those things which

they know not the nature of, and so walk in darkness like one that hath already fallen into a Pit.

But if you come to know such a menstruum or dissolvent, which is an enemy to ☉ or ☽, and yet nevertheless doth plainly dissolve ♂, ♃, ♀, and ♄, then the spiritual ☉ that lies hidden, will manifestly appear corporeally and visibly, and will pass into the *Mercurial* Magnet.

Besides, this dissolvent must likewise be of such a nature, as that (when in the solution or digestion of the imperfect metals, it makes the spiritual and volatile Gold corporeal, and casts it off from it (as I may say) by antipathy in the form of a powder) this powder may not be environed with any crustiness as abovesaid, but that both the Calx of ☽ and of ☉ may have their natural metallick splendor, whereto the ☿ may adhere, and may attract unto it self whatsoever the dissolvent separates by the continual digestion.

Farther, this Dissolvent must be of such a nature as not to be so sharp as to dissolve the ☿ for then the work would not succeed; indeed it is scarcely necessary to make use of the ☿, to receive into it the spiritual and fixt Gold which is separated in the digestion fixation and separation of the Volatile ☉ of the Metals; for when it is once evacuated it will never again occupy (or seize upon) its impure body; yet notwithstanding this chiefly is done for this reason, *viz.* that the spiritual ☉ & ☽ in the imperfect metals may be the more willingly made Corporeal, when it finds a fitting subject wherein it may lie hidden and rest. Besides too, this spirituall ☉ and ☽ of the Metals, is indued with such virtues, as that it tingeth some part of the ☿ into ☉ and ☽, when it hath thereinto entred, whereby it yields the more profit.

Thus much likewise are ye to know, that this

labour does not only proceed in the moist way, but also in the dry; but yet far easier in the moist than in the dry way; yet in the (dry way) a greater profit is gotten in a shorter time. For like as to one measure of Milk are required 1, 2, 3 or 4 spoonfuls of Salt, that so the Cheese (or Curd) may be separated from the water (or whey), but there needs not the quantity of one spoonful of the Spirit, which is much stronger than the bare Salt: Even so stands the case with Metalline operations; for by how much the greater and more powerful the Agent or Contrary is, so much the sooner and stronger doth it perfect its operations. Hence it is, that where the Agent must be yet more strongly active (as in the dry way, it must of necessity be where the strong fire adds virtue and vigour to the Agent) it being consequently more contrary (or powerful) the separation is sooner perfected. For example, Let us see how it is with Milk, where 10 or 20 drops of Spirit of Salt separate some cold Milk, there will need but half the quantity only when the Milk is boil'd or otherwise heated; even so is it with our Agent, whereby we make the Volatile Gold in the more vile or meaner Metals, corporeal and visible; it operates far more strongly in the dry way, than in the moist way; for in the dry way, the external fire aideth our fire, and hereupon finisheth its operation so much the sooner; but in the dry way must another Magnet be made use of.

Thus much let suffice touching the particular washing or external purgation of the viler Metals; as concerning the internal, central, universal washing, by which the interiour Soul of ☉ and ☽ is extracted for the Tincture, I do not as yet (certain) know any thing thereof, nor desire I to know such abstruse and hidden things: content I am with such things as God of his meer grace hath bestowed upon unworthy me,

and if God shall so please, so far to profit mankind either by mine or any others help, he will also present an occasion of laying hold thereon (*viz.* on the Tincture) for all good things come from God.

Now in this action (or operation) is required an ocular inspection, such great things cannot be understood by Books or Writings, and he that desires to excel in these (operations) let him take it in good part, that (I say) he ought frequently to here me as a master, and to see me labouring about these things, which otherwise he will never learn, for the common Alchymists are plainly ignorant of this work; yea the Ancient Philosophers did hide it as a secret, the most they could, that so it might not be trodden under foot by Swine.

But whereas I do so clearly set down these things, otherwise than ever any before hath done, the consideration of the time (or age) requires it, and best of all known it is to God, why he now delivers these things to be divulged. Forasmuch as mention hath been made in the aforegoing treatise of Spiritual ☉, which might be extracted, together with the corporeal, and some or other would perhaps very willingly know what is to be understood by the name of spiritual ☉; I think it not much amiss a little more largely to explain these things for the sake of the Ignorant.

Every Spiritual thing is invisible, and void of a palpable body; but now if a body be given thereunto, in which that spirit may be made corporeal and visible, then the spirit is not any more a spirit, but is changed into a body; if therefore the Spirits are good, they do likewise make good Bodies, and so on the contrary. For all the Philosophers tell us, that the Spirit or Soul in Iron and Copper is more noble than

in ☉ it self, because the body which it dwells in is gross, terrestrial, and impure.

The case then standing thus, it is no wonder that if these spirits are separated by art and force, and expelled from such grose bodies, and joined to other purer subjects, they then produce some good thing. Would not the other Beasts reverence the Ass clad in a Lions skin, as if he were their King, and this mearly by reason of his skin; though inwardly he were an Ass? If so be any man be but cloathed in silken rayment, and go gawdily; do not every body put off their hats to him, and honour him, though inwardly he haply is a thief or a knave; and so on the contrary, if a most honest and most learned man go in tattered apparel, or at least in mean rayment, is he not rejected, and despised by all. From hence it sufficiently appears how sinisterly the common people judge of all things, and neglect the inside, and only look to the outside shew. 'Tis the external Shape, according as tis good or bad, that makes a man esteemed by the vulgar either good or bad, contemptible or honourable, though his nature (or education) possesseth other properties.

The like is to be understood, concerning the contemptible Metals, *Mars* and *Venus*, which according to the report of all the Philosophers have more Tincture in them than *Sol* it self hath; but yet by reason of the grossness of their bodies are they rejected: now therefore, by how much better the means or way is by which this noble Spirit is extracted, and added to the pure bodies, so much the better is the product.

When therefore the gross bodies of ♂ and ♀ are artificially broken, and the spirit dissolved, and thence forced out, it seeks it self another body

wherein it may dwell and be at rest. Therefore when we do by art disturb (as I may say) the gross bodies of *Mars*, *Venus*, *Jupiter*, or *Saturn*, and dissolve the pure Soul, and expel it by antipathy, out of its impure houses, and contemptible garments, and set before it a pure ☿, it possesseth it, and so assumeth another nobler body than it had before, and which then is ☉ and ☽, according as 'tis managed. This is my opinion, and after the same manner is the thing to be understood concerning Spiritual Gold.

But what business have we here with the Spiritual ☉ of Metals? Let us be content with the Corporeal, and leave the Spiritual to the Philosophers, to make the Tincture with. But forasmuch as upon the occasion of my teaching the means of extracting Corporeal ☉, I could not leave the speaking of the Spiritual wholly untoucht, I made also some kind of mention of the same; and it will be beneficial to some or other, who till they do understand my meaning, may be content with the Corporeal ☉. But such as have open and attentive Ears to consider what my drift is in this discourse, my doctrine will be more profitable unto them, than either *Sol* or *Luna*.

There is yet one thing more to be added. In some places they are wont to reduce the *Sol* and *Luna* into a powder with ☿, that so the Corporeal ☉ and ☽ may be separated and extracted from the Stone (or Ore); and this is no new or unheard of thing.

But this is more rare (or seldomer used): a Metal which hath not as yet arrived to his due maturity but is as yet conjoined with his first ens, and consequently it flies away in the melting, and neither yields ☉ nor ☽, when it (*viz.* such a Metal) is commixt with ☿ salt and vinegar, and let lie to act

upon each other for some days, it comes to pass that the Mercury attracts the immature, Spiritual ☉ and ☽, and makes it corporeal and fixt, so as it may thenceforward be molten. If then the Spiritual ☉ and ☽ doth so easily enter into the ☿, and make it Corporeal, it is yet much more facile to be done by my way, which is effected by the help of more strong (or powerful) instruments, than by bare ☿ only, and Salt and vinegar, with which they mix the Metal with the ☿, nor can they possibly do so much as my secret menstruum which penetrateth all things.

When now the Matter, together with the Salt and Vinegar is duly separated from the ☿ by the help of fair water, they pass the Mercury through a skin of Leather, which is again serviceable for the same uses; but that of it which adheres to the ☽, is thence separated in an Iron Retort, then is tried the weight of that which is separated, and as much as there wanteth of the weight of the ☿, so much of ☽ do they receive in its stead, which is a thing well worthy thenoting, and deserves a farther inquiry, and is not here set down in vain.

Let not any one despise these few things which I have here adjoined, for they comprise in them most great mysteries; yea and greater than most will believe.

Neither let any one imagine that I will presently communicate this most noble Secret (which clearly shines in the dark) to every stranger; no, no such matter; I will (God permitting) shew these things to my honest friends, that so it may not perish together with me; but however I will well think on that much used Proverb, *Fide, sed cui vide*; Trust, but see whom you trust.

The *Farnnerianists* have given me this document;

many there have been who have come unto me and declared the miserable state they were in, that what by the Wars, and by other misfortunes, they have lost their Goods, and have begged me for the love of God, to succour them, by communicating to them some operation, whereby they might sustain their lives, promising that they would requite this kindness by their earnest prayers unto God in my behalf.

These and such like words have sometimes moved me that I have given some secret to one or other, and have bestowed on them an overplus too; yet I obliged some of them, that they should convert it solely to their own use, and not communicate it to others without my privity, which thing they promised largely enough. But as soon as they have been gone from me, they have presently sold those secrets of mine to others, and which is more, to my Enemies. Now when by reason of their ignorance, they did not know how to institute the operation aright, they falsely affirmed, that they bought this Art of me at a price, and that they have been cheated; whereas they well know, that it was pure affection induced me to bestow these things upon them without any reward.

These and such other like ἀντίδωρα (or Gift-hinderers) have deterred me from communicating any thing to others for the future; and this I would have every one to consider, and not trouble me with either Letters or Visits.

Yet nevertheless I will communicate store of my secrets unto my Friends, that so they may not clearly perish with me, nor be thrown to my Enemies, and swinish men.

I have done as much as in me lay, nor will I omit to do more where I shall see a grateful mind; in the

next place I will (for the service of my Friends) treat about and shew in the fourth part of the *Prosperity of* Germany, the Secrets of *Saturn*, by what means any one that is but a little versed in managing the fire, may seek (or make) some Country fellows, his tributaries, who may pay him an appointed tribute every week, after the Example of Kings and Princes, who bestow upon their faithful servants (that deserve well of the Country by their valour against the Enemies) Kingly gifts as whole Cityes, Towns, Villages, and many Subjects as an inheritance, of whom they may afterwards receive Tribute and live very abundantly or plentifully.

Now by how much the more Country-men there are that be Subject to a noble man, so much the richer is he supposed to be, for they pay the more tribute. And the more Ploughs the Country-man hath a going, the greater is the tribute he pays his Lord, which thing the governance of States or Common-weals induceth, as being a just thing.

Now after the same manner as these things are in use in political governments, are they also in Alchimy, for it doth likewise when we have for some time faithfully served under her, bestow on us tributary Country men (as 'twere) by way of recompence, from whence we may have Food and Rayment.

The more Fields and Ploughs that we give to these country-folks, the more Tribute do they pay. Neither do these forsake their Masters, for they are shut up in a stall, and when their bellies are filled with Coals, and that they are safe from the Rain (or Weather) they are contented, and do perform the businesses that are imposed upon them.

By how many more the Ploughs are which we give

unto them (though one Country-man can hardly manage above two or three, so much the more do they give.

Such Country-men as these doth the true Alchimy distribute amongst her Servants, whereby they may thenceforward lead a quiet Life.

If God shall vouchsaft me life and leisure yet a while longer, I have purposed with my self to bring most mighty benefits unto my Country.

In the mean while, let these things be accepted in good part, Those same tributary Country-men may be shewn my Friends, together with sundry other profitable Inventions, in my laboratory.

THE FOURTH PART OF THE Prosperity of GERMANY.

In which are revealed many excellent, usefull Secrets, and such as are serviceable to the Country: and withall, several Preparations of efficacious Cates extracted out of the Metals, and appointed to Physical uses; as also various Confections of Golden Potions. To which is also adjoyned a small Treatise, which maketh mention of my Laboratory; in the which there shall be taught and demonstrated (for the publick good and benefit of Mankind) wonderfull Secrets, and unto every body most profitable, but hitherto unknown.

The PREFACE to the Friendly READER.

Although I promised, above a year ago, in the Preface to that Book which I published of the Nature of Salts*, that (besides Salt) I would likewise adjoyn some Broth and sugared Sawces and Seasonings to the other Meats disht out upon the Table: yet notwithstanding such as are searchers after good Arts, would not in any case allow me so much time as to prepare those Sawces; and being prepared, to dish them forth upon the Table: but earnestly requested this boon onely,* viz. *that I would not forget to furnish the said Table with Cheese and Butter. The satisfying of whose request, I confess my self very ready to yield unto, nor doe I find any other obstacle, save onely the scantness of time, which I am constrained to imploy about other affairs more necessary.*

But however, seeing it is esteemed a very praise-worthy action in a Man, by diffusing his kindnesses in many places to benefit many, I have deemed it a thing well worth while, to adjoyn (setting aside other things) unto the afore-disht-out Meats those promised Sawces, with Butter and Cheese, in to boot; but yet, with as much brevity as conveniently may be.

Had a longer space of time been permitted me, I would have clarified the Sugar better, and made the Sawces more savory, which the hasty posting away of time hath hindered the performance of.

Besides, forasmuch as I have promised a Fourth Part of the Prosperity of Germany*, together with a disclosing of excellent metallick Medicines, it hath seemed good unto me (for the fulfilling of my promise) to publish these my most efficacious Sawces under the Title of the Fourth Part of* the Prosperity of Germany*; and the rather, because I have not time sufficient for the*

description and detection of other Secrets.

Now by how much the viler and more contemptible cloathing these present Arcana's do come abroad in, so much the greater and more noble virtues do they hide under their sordid or despicable rayment. I was of the mind, I confess, to have kept yet longer by me this Fourth Part, that so (being sent abroad to publick view in a more convenient season, it mought have been more adorned with Secrets of greater moment afore its being exhibited to every ones view. And amongst those Secrets, one eminent one, is the Concentration of Gold and Silver, and their reduction into such a form and figure, as that it cannot at all be known by our Enemies (who sometimes rush in upon us unlookt for), (which [sore affliction] God (of his mercy) keep us from.) And so by this means may it come to pass, that such kind of Bodies being thus hidden under an unknown Garment, will not be robb'd and taken away.

And whereas I have demonstrated in the foregoing Third Part, by what means great Treasures of Gold and Silver may easily be gotten in all places throughout all Germany*, by the help of my Inventions; I made no question, (nor indeed can it otherwise be) but that such as are diligent House-holders will listen unto my sayings, and put in practise many of those things, especially seeing I will both counsel and assist them, as much as in me lyes.*

If now the searching after so great Treasures be [not] too securely and negligently handled, it will undoubtedly come to pass, that our Country will (by such a notable Medium, and such great Treasure) be rendred even wholly invincible. History maketh mention, that the Ægyptians *(by their skill in the Meliorating of Metals) enjoyed such vast riches, and so great a power, as that they cast from off their necks the Yoak of the* Roman

Monarchy, even untill that time in which their Books comprising the Art were burnt by the Emperour Dioclesian*, whereby they were enforced to be subject to the Empire of* Rome*. For the most noble Art of Printing Books was in those days unknown, and their Sciences were wont to be written in Parchment with great labour and much cost; and undoubtedly they were not throughly stored with such kind of Books, whereby the* Romans *did the easilier get them into their hands and burn them.*

Now when once a Writing is committed to the Press, it may be printed off in an almost-infinite Number, for a Printer will doe more in one day, than a vast multitude of Scribes would be able to write. And being it is so, who could possibly be able to scrape together out of all the places of a whole Country such a multitude of Books, thereby to root them out in these our times, and by burning annihilate them, as the Romans *did.*

This one thing I here say, viz. *Did I but know and find that those things which I have hitherto published, would not onely be acceptable, but be also put in use and practise, it would be as a spur unto me to stir me up to adjoyn to what is already done, more and greater Secrets. Meanwhile let what is at present offered be well accepted, and what is promised, be patiently expected.*

Of the word Sawce*, and what is meant thereby.*

I have obliged my self by promise, to adjoyn unto those my Meats which I have hitherto disht out upon the Table, some good Sawce and Pickle; which Meats, seeing they appertain not unto the plain common ways, but belong to a very excellent Skill or Science; it is altogether needfull, that the Sawces be correspondent thereunto, and that even they as well as the meats themselves, be by reason of their

savouriness, gratefull unto the Palate. Now therefore as in the Feasts of great men, the Pickles are not set on the Table afore the Guests have fill'd themselves with Flesh and Fish, and so allayed their hunger, but are set afore them (afterwards) as so many Vehicles to drill down the Wine with the greater delectation, for such Pickles do for the most part communicate a sweeter (or toothsomer) tast to all kind of Fruits, Seeds, and Spices, and Sugar: So likewise must I, in the making and dishing out such Sawces for this Feast of mine, mind onely this business, *viz.* to take care of providing my self of the best Sugar, and choice Spices; and these are extractable onely out of the Metals; *Saturn* affording Sugar, and *Sol* and *Lune* yielding most sweet Spiceiness.

But afore I dish out my Pickles, I have thought good to set afore them a sweet Broth or Seasoning, [together] with Butter and Cheese, that haply one or other of my Guests are minded to dip a piece of Roast-meat therein, or else to tast of my Butter and Cheese, whereby they may with the greater delight tast the sweetness of the following Sawces.

And although I was minded to exhibit in this place some excellent and efficacious Metallick Sawces: yet notwithstanding I could not chuse but first present you with a fore runner as 'twere, signifying unto you, how that by the help of Salt good Broths and Sawces may be made out of the Vegetables, and Sawces, serving for the bettering of Cheese and Butter made out of Animals: that so my Treatise of the Nature of Salts may not be at all defective, and that every one may see what a most noble and most excellent Creature Salt is, which is capable of exalting the Animals, Vegetables and Minerals to a far more worthy degree by so excellent a Melioration of them.

Salt and Vinegar are commonly reputed to be the best Sawce, and 'tis most truly spoken: For amongst all the Sawces and Seasonings put unto Meats, Salt and Vinegar bear the bell; now the Vinegar is for the most part made of Wine, Fruits, Ale, Honey: But as for Salt, if it be turned by distillation and rectification into a sweet and acid Spirit, it becomes a sweet and strong Vinegar, and to be preferred before all others: so that there's no need at all of the Vinegar of Wine, Ale, Honey, and Fruits. We will therefore shew unto such as are desirous of sweet or savoury Sawces and Picklings needfull for Flesh and Fish, and of well tasted Cheese and Butter, the way of preparing the same by the help of Salt; whereby a Man may make himself for his own Kitchin use or Cookery, various Sawces as him listeth. And having shewn this, we will proceed on to the description of metallick Sawces.

He that is desirous of a good Sawce or Pickle fit for Flesh and Fish, will not find any thing that is more fit or proper than a well-prepared and rectified Spirit of Salt, the which he may prepare with whatsoever Herbs and Spices he pleaseth, according as is agreeable to his Palate.

For example, Like as otherwise most acceptable Broaths or Sawces are wont to be made with Wine, Vinegar, Pepper, and other Spices, and are put unto the Boiled or Baked Flesh or Fish in the same Dish, or set by the same in little Sawcers, that so all those Meats may leave the more gratefull tast upon the Palate: Even so may the same be effected with Spirit of Salt, and that far more commodiously, and to better profit than if Wine or Vinegar were made use of to the confection of those well tasted Sawces. But it is my Spirit of Salt I here speak of, (which being

prepared according to my prescription, is of a most delicate pleasantness,) and not of that which is most an end sold in the Apothecaries Shops, and in other such like places, and is for the most part ill prepared, and not at all rectified, and consequently by its ungratefull sharp and harsh tast, it provokes to Vomit, if it be taken into the Stomach; 'Tis likewise of a yellowish colour, and with its sharp constriction draws up the Tongue, whereas it should be more clear and transparent than Fountain Water, and by the pleasantness of its acidity excell the juices of Apples, Grapes, or Limons. And being furnished with such a sweet or pleasant Juice of Salt, I need not any Wine, Vinegar, or other sharp Juices of Grapes, Limons, Rasp Berries, Sorrel, and the like, to give a pleasant and savoury tast unto my Flesh or Fish: for it may be done far better with this good Spirit of Salt, than with Wine or Vinegar: For, that Spirit of Salt serves instead of them all, nor is it at all subject to corrupt as other Juices are, but conserves its sweet and pleasant essence without any decay. But if you would make use thereof singly or alone, then must a little Water or Sugar be mixed therewith, that the acidity or sharpness thereof may be a little allayed, and thus may it serve instead of a Sawce to be added to either baked or boiled Flesh or Fish. But now if a man be minded to add green Herbs for alterations sake of the tast, such as are Parsly, Garden Cresses, Spanish Pepper, and the like; he may beat or shred them small and moisten them with Spirit of Salt allayed with Water, and so put them instead of a cold Sawce to Flesh and Fish. But if now the Sawce is to be poured warm to the Fish and Flesh, then must a little Butter be thereto used, and that on this wise following. Take some pure and clean Water, and make it somewhat sharper (with good Spirit of Salt)

then strong Wine, Vinegar, put thereunto some good Salt Butter or Fresh, at your pleasure; and likewise such Spice as (besides Pepper, Ginger, Nutmeg, and such like) you list to add, as also Salt if need be; put it in a little Earthen Glazed Pot, and not in a Copper or Iron Vessel, for they are altogether unfit for this Operation; set the Pot over a few Coals and heat it gently to melt the Butter, then stir it throughly about without ceasing, with a Wooden Spoon, and then being molten it assumes to it self the saline Vinegar, and the Sawce becomes thickish, the which must be then poured out to the boild and seasoned Flesh or Fish. But if green Herbs, as Chervil, Parsly, Cresses, *Piperitis* or Spanish Pepper, and such like are to be adjoyned thereunto, you may bruise or chop them small, and then put them into the Pot unto your hot Broath or Sawce, and mix them well together, and then presently pour out your Sawce to the Flesh or Fish, for by this means the Herbs retain their tast and greenness, and so delight the Eyes with their lovely aspect, and please the Palate with their pleasant tast, which would not be if they boiled much with the Liquour, for then they would lose both their subtile tast and green colour. Moreover, you are warily to observe in this thing, that this Broath or Sawce be not let lie upon the Coals too long, and so the *Acetum* separate it self again from the Butter; which to prevent, there may be mixt with the Sawce one, two, or three yelks of Eggs, which being well stirred with the same makes it the thicker, and better to stick on to the sopping when you take it out of the Dish where the Flesh or Fish is.

Such Sawces do give the Fish either boiled or fried, a most acceptable tast, and probably if some Sugar be thereto added it would do very well for Flesh too. But yet, sharp Juices or Broaths are better and more

agreeable for Fish. Now after this manner may every one make his own Sawce as he listeth, and render the same with some Herbs and Spices, the more savoury unto his Palate; and consequently needs not either Wine or Vinegar, nor any other acid things.

If any one has but any pure and clean Spirit of Salt at hand, he may (by the addition of certain Herbs and Spices) prepare his Sawce as best likes him, and make it far more pleasant and delightsome than if it were made with Wine, Vinegar, or Ale-Vinegar, nor can you get these every where neither. But the Spirit of Salt may be prepared and so had every where, and therefore on that account too is it deservedly to be preferred before all other seasonings.

Now in the Winter Season, when green Herbs are not to be gotten, the pounded Roots of Spanish Pepper may serve, or Mustard Powder reduced with Sugar and Spirit of Salt into hot and cold Sawces. Nor would I have any one to be so bold [and foolish] as to contemn these my Sawces afore he hath tasted of the same; for I doubt not but that if he once comes to tast the delightsome pleasantness of the same, he will prefer them afore all other, and will give the Vinegar of Salt its due honour.

And now to give an experiment, taken out of the Treasury of Salt, unto those that are delighted with the tast of good Butter and Cheese; let them listen unto those things which here follow. If thou art desirous to prepare a durable Cheese of Cows Milk, and such Cheese as hath all the tokens of a good Cheese, *viz.* such as is weighty, compact, close without Eyes, and putrifying Holes, void of sliminess and bad smell, thou may'st be a Master of thy desire by observing the following Operation.

Take of Cows Milk, Sheeps or Goats Milk, or of

either of these which thou hast at hand, as much as thou pleasest, or as much as is sufficient, (but amongst these Milks, Goats Milk is the best, Sheeps next, and Cow Milk inferiour to the other two both in goodness and excellency:) Heat it at the Fire, and pour it out into a wooden Vessel (*N. B.* Iron and Copper Vessels are not to be used in this way) and reduce the Milk into a Curd by the pouring on of Spirit of Salt. Now one Spoonfull of this Spirit is enough to curdle ten measures of Milk. This done, and the Milk and Spirit of Salt having been well stirred about with a wooden Ladle and curdled, put the same into Hair Strainers or in very clean Linnen ones, that so the Whey may drain out and be separated, then gather up the ends of your Strainer, and lay thereon heavy weights and squeeze out all the wheyish moisture. Then take your Cheese out of these Strainers, and put it into wooden Vessels, and there break it into small bits or pieces; which being thus broken, sprinkle some Salt, and some of your pure Spirit of Salt too thereupon, and mix all well together with a wooden Ladle or with your hands well cleansed: Being thus mixed, fill your Vessels or Cheese Fats [which let be] greater and lesser [as need is,] and squeeze and compress the matter well in, as they are wont to do in making of Cheeses. Then expose them to the warm Air, and dry them, and it will give you compact and durable Cheeses, not unlike to those they call Parmesant, and such as will be void of Eyes, and of fœtid and putrid Holes, Slimyness, and such like defects usually incident to the common Cheeses, nay they never are obnoxious to those faults.

The reason is, because the first Coagulation or Congelation of the Milk is made by the help of pure Spirit of Salt, which defends from all putrefaction,

and not by the help of the fœtid putrid Rennet, from which nothing can proceed but Rottenness and Worms.

Then farther, the Spirit of Salt being together with [Crude] Salt sprinkled thereupon (after the squeezing out of the Whey) doth in an especial manner resist all that putrefaction that is wont to be in Cheeses, and condenseth the Cheeses, and impedes any fermentation, which dilateth the said Cheeses and makes them spongious and porous; and by thus condensing them, it makes them remain safe and free from all putrefaction.

Such Cheese therefore as is brought to this perfection, doth well deserve the preheminence above the rest, and is extolled by the praise of those Ancient Verses, *viz.*

Good Cheese must neither *Argus* be, *Largus* nor
Magdalen,
Methuselah, nor *Habbacuck*, nor *Lazarus*,
[Amen.]

That is, it must not be eyed like *Argus*, nor tough like *Largus*, nor hairy and crying like *Magdalen*, nor hoary like *Methusalem*, nor light like *Habbacuck*, nor full of stinking holes and rotten sores like *Lazarus*: which defects if Cheese wanteth, it well merits the title of goodness: and such are those Cheeses which are made by the help of the Spirit of Salt; do but make such a Cheese and try whether or no it will not be of a more pleasing relish than all others are.

Such Cheeses are never corrupted, they never become tenacious, limber, full of holes, and worms. The Spirit of Salt being poured into the holes of Sheep Milk Cheese, or Cow Milk Cheese, doth either kill all the Worms or cause them to get packing, it

contracteth the holes, and turns the bad Cheeses into good ones, and this my self have tried.

Thus friendly Reader, hast thou learned how to make a fit Sawce for Fish and Flesh, and likewise good and durable Cheese; it now remains that we teach thee how also to make good Butter.

If you are desirous of making good Butter by the help of Spirit of Salt, and such as is dainty, pure and yellow, and of a most delicate tast, and such as will not easily contract a ranck tast, you may obtain your desire by proceeding on this wise. Take off the Cream from good Cow Milk, and make it into Butter, afore it be any thing mouldy, or of an unpleasant tast, and separate the Butter-milk according to the usual custom, then put the Butter in a wooden Vessel, and wash it so long in pure cold Salt Water, untill there be no more Wheyishness left, and that the Salt Water do come off thencefrom, as clear as it was at first putting on, and that the Butter appears sufficiently clean, which wash it once agen, on this wise following. Dissolve in pure and rectified Spirit of Salt, as much Salt as it will dissolve in the cold: And herewithall wash your Butter anew, yet several times, and work it well with that Spirit, and by thus proceeding will it absume the residue of the Wheyishness which is the cause and rise of rankness, and which common Salt Water could not remove. This done, the Butter is to be seasoned with common Salt according to the usual manner, and thus will it abide perfectly good for a long time. But now the big Sea Salt is accounted the fittest for this purpose, which being a little heated red hot in the Fire, comes to be of a very delicate whiteness, and doth the easier admit of reduction into fine Powder, and is better than that which is boiled up in Iron, or Leaden

Pans or Cauldrons.

N. B. But he that can get such a pure sort of salt of a sexangular shape like a Dye, as is prepared in my Laboratory, he may use that, as being by far the purer. As for the Vessel it self whereinto the Butter, prepared and cleaned after the aforementioned manner, is to be put, it must be ordered on this wise following. You must get you a new Oaken Barrel, and so steep it in strong Salt Water, not the common [Sea Water,] as that it may well imbibe the Salt into this Vessel must the Butter, washt as aforesaid, be prest and thrust in so tight and close, that there may not be any hole or gaping place left therein; but you must leave two Fingers breadth in the Barrel at top of the Butter, which is to be filled up with Spirit of Salt, glutted with good and pure Salt dissolved therein, that so the Butter may be well covered over, and all Air being excluded, it may keep fine and savoury a long time. Now when you would Dish out some of this Butter on the Table, you must take it out of your Tub with a clean Wooden Spoon, and not an Iron one, and wash the same in pure and clear Water afore you eat it, if you would not have it retain the sharpness of the Spirit of Salt.

Well, here is yet a better way still, *viz.* Take new Butter and let it melt very gently over the Coals, and it will be covered over with much frothy Cheesyness, let that froth be neatly scummed off; which being so done, it will look in the Pot like to a pure and clear Oil, pour it out very clearly into another Vessel, that the sediment at the bottom may abide behind. This Butter when ’tis cold looks just like yellow Wax, but yet is it a little softer than it ought to be, and therefore it must be well wrought its due time with Spirit of Salt impregnated with new Salt, that it may

obtain the hardness of common Butter, and then be salted, and barrel'd up, and kept for use, which will be far better than the common Butter. For although this purging it by the Fire takes from it all its Cheesyness, from which it had its hardness; yet notwithstanding the Spirit of Salt gives unto it a far different and much better hardness, and causeth it to excell all other sorts in goodness and long keeping.

These things was I willing to take out of my Kitchin and set afore you, namely Sawce, Cheese, and Butter of good and exquisite tast, which if they please not the Palate of some or other, I would have him even forbear to use them. It is not without some weighty cause that I have done these things, which I well know will undoubtedly undergo the perverse Censures of Spies and Mockers, who probably will say, what Womanish Toys, and Childrens Baubles doth *Glauber* here Tattle about, making himself a Laughing Stock to the Women, and Female Sex, who will say of him, that by his teaching to make Butter and Cheese, he hath thrust his Sickle into the Womens Harvest. Well, let them prate as pleaseth them, Geese are not wont to utter ought else but a Goose-like Gagling. For my part I minded nothing else but to have this Treatise be a meer Woman's Work, and Boys Play, [but yet] it will reveal to the Ignorant more good, than [is attainable] by the perverse instructions of all such Authours whose Writings are Spinn'd out to that height of subtility as to exceed every ones Capacity.

'Tis not every one that will easily apprehend those [Knacks] which I teach and reveal under this Cheese-making Trade, and these Kitchin Operations; nor indeed doth it much matter that they should understand. God will open the Eyes of such as he

shall judge worthy of such great gifts, and will conceal and hide the same from the Proud and Wicked Crew.

Having thus finished this Cheese and Butter-making: Let us in Gods Name enter upon another Work of Women, and Boys Play, which Kitchin-like Labour, and Cheese and Butter-making, is meerly metallick and doth far excell in excellency and nobility the hitherto described Operations, although it be performed by the help of the self same Salt. For without Salt no imperfect Metal can be really bettered, the very title of the Art it self witnessing as much, which being stiled Alchymy, signifies no other thing than a melting of Salt: but yet I do not tell what kind of Salt is here to be understood, [or, that any kind of Salt is here meant] but thus much onely do I averr, that the transmutations of the Inferiour Metals must be effected by Salt.

Now then, forasmuch as this Treatise of mine depends on a former, intituled of the nature of Salts, as being an overplus; so it is likewise altogether necessary, that instead of Fruit and Sugar, I use Salts and Metals about the preparation of these my Sawces.

And whereas the making of the Sawces [or Sweet-meats] with Sugar, doth not onely belong to the meaner Sex, but also to the more noble, and yet nevertheless the Operation it self is nothing else but a meer washing and boiling, and a true Womens Work, we will therefore in our description bring the same upon the Stage under the Title of the Work of Women, and Play of Children.

If we rightly look upon the Work of Women, and compare our metallick labour therewithall, there presents it self unto us, a very notable agreeableness

betwixt them. The Womens Work is to boil and wash, and when they are about to boil, they set their Pots over the Fire, and having washt their Flesh, they strow thereon some Salt and Spices, and boil the same in the said Pots with Water, Wine, or Vinegar, till it be tender, and become fit to be eaten. They likewise feed the Fire they boil withall by putting Wood thereon, whereby the heat may be kept up, and no impediment may betide their Work: And this is the way and method observed by the Female Sex in their boiling.

But as to their washing off the filth from their Cloaths, they are wont in the first place to pour hot Water thereupon thereby to wash off the more gross part of the Dirt: and then they use a sharp Lee, or some Sope, or even both together to take away the remainder of the filth, and to wash out all the Spots and Dirt, then do they agen wash off the Sope and Lee with fair and hot Water: But as for the odour that the Sope leaves, and which by no washing how much or how oft soever it be done can be carried off, to get that off I say they are wont to lay their Linnen out in the open Field, and sprinkle and moisten it with pure Water, which being dried by the Sun, Air, and Wind, they do agen repeat the same labour, untill all the stinking smell of the Sope be drawn forth by the Sun and the Air, and a better and more wholsome Odour come in its room. Then at last they dry them at the Air and Sun, and being dry, they fold them up and put them in their Chests and Trunks, and keep them for their use.

Just so do we deal with Metals, when we wash off their defilements, and do by boiling turn them into wholsome Food or Medicaments; but yet we do not use common Vinegar, common Salt, and common

Spices, but mineral or metallick subjects, as also a duplicate Fire, *viz.* one of them is a secret, philosophical, moist, cold, and vaporous Fire; and the other is the elementary and common Fire, by which we stir up the former Philosophical Fire to display its virtues, and render it powerfull and efficacious.

The elementary Fire we make with Wood, Coles, or Oil: The universal Agent, or Philosophical, Cold, Moist, Digesting, Penetrating, Mundifying, Bettering, and not Burning, but Conserving, and vaporous Fire, we seek for in Salt, and leave the Operation to the vivifying Sun and Air; which being well done, we obtain wonderfull Plants, and most efficacious Food, or Sawce for our Life.

And forasmuch as my purpose here is, to treat of such metallick and medicinal Sawces, I will here in God's name adjoyn some of them, which being as so many samplers or patterns, every one may at his pleasure imitate in composing and making of the like. And he will here find a way of confecting some good Medicament, as clearly and evidently demonstrated by me as was lawfull for me to do, nor was it in my power to discover the same more perspicuously: And therefore I beseech every one to take in good part what is here presented, and to forbear to trouble me for the time to come with needless questions.

So then, seeing I am about to treat in this place of metallick Sawces, it is also behovefull to have a metallick Sugar and Spice, and this, *Saturn* will afford us in the steed of the common [Sugar] by whose help we reduce *Sol* and *Lune* as being most excellent Spices, into most effectual Medicines.

Nor would I have it seem strange to any one that I

use Lead here instead of Sugar, for the inmost juice of Lead, doth exceedingly out-go the sweetness of any Sugar, which thing *Isaac Holland* doth very evidently testifie in his Treatise of *Saturn*. The Chymists do frequently extract a sweet Salt out of Lead, with distilled Vinegar, and call it the Sugar of Lead, and do very well know and find that there is such a sweetness in Lead as is not in any other Metal beside. From it therefore will we prepare our Sugar to make our metallick Sawces withall, as follows.

Take of Lead-ashes one, two, three, or more pounds, which put in a strong well glazed Earthen Pot, then pour thereupon some Wine or Ale, Vinegar, or Vinegar of Honey, as much as may over top it an hands breadth. Set your Pot upon the Coals and make the Vinegar boil.

N. B. The Ashes are to be uncessantly stirred, in the boiling with a wooden *Spatula*, lest they gather into one entire solid Mass: After that the Vinegar has boiled for about half an hour, and is become yellow, and as sweet as Sugar, you must decant it from the Ashes, and pour on more, and agen boil it, and extract more sweetness, and this labour must you repeat so often untill the Vinegar can extract no more sweetness; then having put all these Vinegars together, pour them gently off from the Fæces that settle in the bottom of the Vessel, and being thus Separated, filter the same through Cap Paper or by a filter, that so the Liquors may be very clear, and may give you by separation, that sweetness of the Lead which they hold up in them.

Into these clear Vinegars, therefore being put in a Glass Vessel, pour thereinto (by little and little) as much rectified Spirit of Salt, that so the yellow Vinegar may be turned into a white Milk, and may

by little and little settle to the bottom like curdled Cheese, from which the Vinegar being now become agen clear is to be removed by decanting; then put the Saturnine Cheese in some strong Linnen Cloath and tie it hard up, and squeeze out the residue of the moisture, and so dry it and lay it by for use. It is a most tender Powder, of a bright snowy colour, and void of all tast; for in the precipitation, all the sweetness being introverted by the Spirit of Salt, hath hidden it self within, which doth again afterwards (when that mass shall be reduced into a Sawce) shew it self, and discovers its former tast, as we shall hear anon.

I would have the friendly Reader know, that I am not minded to produce here many and divers Operations, for I am straitned in my time, which stops me from giving you a more prolix and circumstantial description: I do onely propose some few, and leave every one to his fancy to make the rest of the Sawces or Medicaments, according to the ways here prescribed, according to his likeing, and that as many as he will, and out of such subjects as best pleaseth him.

But that I may contract these things concerning my Sawces into a narrow room, I suppose it is well enough known, that Sawces and Junkets are disht out in the second course for this end, either to close up and Strengthen the Stomach, or that if a fudling storm be at hand it may drill the readilier down into the Stomack by these kinds of Vehicles.

But yet my purpose is not directed to this end as to teach the making of such banqueting Dishes in this place, as may allure Wine into the Stomach by such an unprofitable Prodigality, and so detriment the Body it self too. No, but the main drift of my Sawces

should rather be this, *viz.* to remove that evil which is stirred up in the Body of Man, by the common Junkets and the overmuch guzling in of Wine, and to Strengthen the Stomach, Heart, Brain, and other Members of the Body, to heal the parts that are hurt, and in particular, to restore them to their former health: And finally, to be as a kind of guide and manuduction to lead on the Ingeny of Men in such wise, as that they may by an easier way arrive unto the Knowledge of the universal Medicine.

To begin therefore, I confess that of [all] fruits preserved with Sugar, none have a more gratefull tast on my Palate than Bar-berries, and Ribes, or St. *John*'s Grapes as they call them; which fruits, preserved up with Sugar, do not onely get the Stomach an Appetite, but do withall allay Thirst, and do extinguish all the internal heat stirred up and kindled by overmuch drinking: The like metallick Sawce or Junket shalt thou prepare on this wise.

Buy some Steel filings of the Needle-makers, and take thereof as much as you please, dissolve them in rectified Spirit of Salt, which Solution will be green, and be of a sweetish tast; abstract the insipid Phlegm, insipid I say, for although it be a very strong Spirit of Salt that is poured upon the Iron, yet nevertheless no Spirit comes off, but onely an insipid Phlegm in the abstraction and distillation, and the Irons retains all the acidity of the Salt, and remains a red, sweetish, astringent Juice.

Take of this, and of the Saturnine Powder which we taught you the making of but now, of each alike weight, and put them into a well coated Retort, and the *Saccharum Saturni* will presently drink up the Juice of the Steel. Put the Retort in a Vessel fill'd with Sand, and augment the Fire by little and little

that all the insipid Phlegm may be wholly drawn off. When 'tis all come off, and that acid drops begin to come, then must you apply thereunto a Glass Receiver, and the Fire is to be encreased by degrees untill the Retort be throughly red hot, which must continue so about an hour, or half an hour a least. By this means, the Spirits of the Salt which were in the Steel, do almost wholly come over into the Receiver, and do carry over with them [the Spirits] of the *Saccharum Saturni*, and oil of *Mars*, in the form of a red sublimate, which settles it self in the neck of the Retort, which sublimate when the Retort is cold and broken you must take out of its Neck, and keep it from the Air, for in the Air it will dissolve into a red, sweet, and Astringent Oil, of no small virtues in Medicine and Alchymy. In the bottom of the Retort you will find a molten Mass, resembling *Lapis Hæmatitis*, which being separated from all defilements, will give you a red, brittle, fusile Stone, and in some sort astringent, of great virtues in Medicine, and without doubt in Alchymy too, if it were but first made constantly to abide in the Fire. And even this too, must you keep from the Air, for it is still impregnated with the Salts, and therefore is easily resolved.

Now when you would make use of this Stone in Medicine, break a little bit thereof into small Powder (for it is no harder than other Salt, and therefore doth easily admit of grinding to Powder.) This Powder heals both internal and external Wounds and Ulcers, being administred in the quantity of two, three, four, five, six, or more Grains, according to the age and condition of the Sick, and being taken in a convenient and proper Vehicle, it is highly Sanative and a stopper of Bloud. Being applied externally to Wounds, it wonderfully forwards healing; hinders all

Symptoms, and fundamentally dries, and cures all Ulcers and Fistulaes, if used outwardly and inwardly too.

It doth most safely and most certainly help all the overflowing of the Menses in Women, and is so excellent a Medicament in the *Dysentery*, *Lientery*, and other *Fluxes* of the Belly, that its like is not to be found.

Thus have we that true and genuine *Hæmatitis* of the Ancient Physicians, of which they have written so many things, but what through the carelesness of the Physicians that succeded them, and what through the length of time it became wholly lost instead of which there hath been hitherto used the insoluble and hard Stone of Iron.

The Ancients imposed upon their more noble Medicaments, Names deduced from similitudes or resemblances, as may be seen in this our living *Hæmatitis*, and in the dead *Hæmatatis* of the common Physicians, which is call'd for at the Apothecaries, and administred to stop Bloud withall; But yet it is nothing else save the Stone of Iron, and such Oar as is very rich and abounding with this Metal, the fragments of which appears [either] in the form of spear-like Stria's or Streeks, or like a cleft stone. This our live *Hæmatitis* is of the same form, but soluble, and is of a very pleasant and astringent sweetness, and containeth most efficacious virtues for the allaying of all bloody Fluxes both outward and inward. Now that common and well-known *Hæmatitis* doth not possess any more virtues than that Iron Scinder-dust which the Smiths smite off at the Anvil, doth. And as for that red Sublimate which ascended up in the neck of the Retort, it is twice stronger in subduing the afore-mentioned diseases,

but it is not of so sweet a Tast as is the Stone it self, which resided in the bottom of the Retort. And being externally applied in cleansing and mundifying old Fistulous Ulcers, it works much stronger than this our *Hæmatitis* (which is more pleasantly administrable in internal defects) doth. But whoever he be that knows how (by many Solutions and Coagulations) to make this Stone constant in the fire, will obtain a far more excellent Medicament: concerning which, we will speak more in the end of this Treatise.

This now is such a Sawce or Junket, as every good Physician and Chyrurgeon hath just cause most highly to esteem in all Fluxes and Sores, both old and new, if he would obtain that repute which he thirsteth after; for it is endued with great Virtues, whereas on the contrary, the Juyce of Sloes, the common *Hæmatitis*, and *Crocus martis*, are, in comparison of this, to be accounted of as meer dead Medicaments. I could tell you of more virtues that are in the red Sublimate, and this in an especial manner, *viz.* that without being either bound on, or inwardly taken, but sympathetically and at a distance, it is able to cure any issues of Blood whatever. But I shall doe better to pass these things over in silence, because to the greatest part of unskilfull Men, they will not onely seem wonderfull, but impossible likewise. However, I commend to every ones acceptation this so excellent a Medicament, for all internal and external Issues of Blood, in all wounds and hurts, as also in all the obstructions of the Spleen, Liver, and other members of the body.

After such a manner as this, may any one easily turn all the Metals into Sugars, and into most

excellent Medicaments. But forasmuch as the Metals are not all of them indifferently fit to be administred inwardly to the sick, I will make mention of Gold and Silver onely as being the best of all, and pass by the others, and will teach the preparation of yet more Sawces and Junkets; Copper, Tin, and Argent-[*vive*] are somewhat cruder bodies, and require greater care and diligence, to have the Title of good Medicaments. We will therefore let them pass, as having Gold and Silver at hand, which are more ripe.

The manner of Preparing a good Sawce or Junket out of Silver, which helpeth the Distempers and Diseases of the Brain.

The skilfull Chymical Physicians have assigned Silver for a Medicament for the Brain, which Assignment of theirs I acquiesce in, and doe here present you with such a Sawce or Junket as is of most especial use for the succouring of the Brain.

Take of common *Aqua Fortis* (such as is commonly used about the dissolution of Silver) one pound: In two ounces of which you must dissolve one ounce of pure Silver; Dissolve likewise one ounce of Lead by it self: Put both Solutions together in a glass with a wide mouth; and being thus mixt, pour thereupon as much rectified Spirit of Salt as is sufficient for the precipitation of both the Metals. Pour off the clear water from the precipitated Metals, and pour upon them some fresh water, and stir them well about; which done, and the precipitated Calx settled to the bottom, the water is to be again decanted off, and more fresh water poured thereon: and this Labour is to be so often repeated, untill that precipitated Powder be void of all Acrimony: then put it in a pure linnen Cloth placed in a Funnel, that so the

remaining moisture may drain from it. Then tie the cloth very firm, and squeese out, in two balls (or squeesings) all the residue of the moisture out of that silvery Cheese, and lay the same upon Cap-paper, and that will drink up all the rest of the moisture, and will soon dry your Cheese. This Cheese (or precipitated Powder) is to be put into a well coated Glass-retort, and to be forced with a gentle fire of Sand, that so all the superfluous moisture may be separated. Then, at last, the Fire being augmented, will force out part of the Silver and Lead in the form of white Flores, ascending up in the neck of the Retort. Now when the Retort hath been thus kept red-hot for one hour, let the fire go out of its own accord, and take out the cold Retort, and break it, and you will find in the bottom of the same a white and sweet Stone, which will melt (upon a red-hot Plate of Metal) like Wax, and penetrate the same, and is volatile like *Argent-vive*. Two, three, four, five Grains, even to eight or ten, of this Stone ground into a Powder, being administred (respect being had to the Patient's age and sickness) yield a most present comfort in the diseases of the Head and Brain, and so are those white Flores wont to doe likewise: but in Chymical operations they are of eminent use. Now although this Stone be it self of a fugacious nature, yet notwithstanding in progress of time it makes *Mercury*, together with it self, constant in the fire; of which thing I have elsewhere already mentioned in my Writings, so that I need not say any more thereof in this place.

However, I cannot omit to tell you, that, although, otherwise, there is no familiarity at all betwixt Silver, and Lead, and Salt, yet nevertheless these three may be so prepared as (by a certain mixtion) not to refuse each others society. Hence it comes to pass, that if

the Salt be rightly fitted for this operation, it puts forth more powerfull virtues, and for that reason doth the Silver suffer the more, and doth by so much the sooner attain to a constancy in the fire: and so 'tis evident, that the name of Alchymy or fusing of Salt, was not imposed on this Art for nothing. For by the help of Salt, are the Metals to be molten and meliorated, which thing you may take notice of.

Another Sawce or Junket made of Gold and Silver.

Take some pure Silver, and dissolve it in *Aqua Fortis*, and precipitate it with Spirit of Salt, and free it from its Acrimony with common water, and squeese out the water, and lay your matter upon cap-paper to dry, and deal with it in all respects as we spake afore in the Process of *Saturn*. Of this Calx take three parts, and one part of Gold dissolved in the Oil of Salt; and first put your Silver Calx into a strong Glass-retort, which must be well coated, then pour thereto your yellow Solution of Gold. Place the Retort in Sand, and, first, force out your Spirit of Salt, in which forcing out, the Calx of the Silver will retain with it self the Gold; and of them both will be made a purple Stone, inclining somewhat to redness, fusile, and volatile. But the Oil of the Salt will carry up with it something of the Gold and Silver into the neck of the Retort; which, together with the aforesaid Stone, you shall take out of the broken Retort; but yet you must keep each apart, for a medicament of great moment: [both] which (if they were turned (by Solution and Coagulation) into a fix Ruby,) would doubtlesly perform their work, in the metallick Operations, with greater benefit and profit.

So have you here, briefly described, the third Junket, which, should it be described with all its

Circumstances, the Process it self would in good sooth be more prolix and tedious than is fitting. And forasmuch as my Writings may seem unto many sufficiently tedious, 'tis but fit that I aim at brevity here in this place; though (on the other hand) they will seem (I well know) too short and brief unto others. But *Jupiter* himself pleaseth not all alike. And the birth-day of him who can satisfie all, is yet to come; for he is not as yet born. For behave thy self as thou wilt in thy actions, either in briefly delivering thy self, or in uttering thy mind in a longer discourse, thou shalt not at any rate fulfill the expectation and desire of all men. I doe therefore here dish out this Junket, and commit the care of eating the same to the Guests. Every one that will, may more accurately weigh and consider of the same, that so he may come to find, how great the Efficacy and Utility of this Process is, though delivered so very briefly.

Another Junket or Sawce, viz. *A Confection of a Mineral* Alkermes.

There is in the Apothecaries shops a Confection made of the Berry or Grains of *Kermes*, known by the name of *Confectio Alkermes*; in which composition, there are added to the said Berries some Pearls done into Powder, and Leaf-Gold, and Amber-grease, and other such-like corroborating Simples. This medicament being confected with Sugar, is lookt on as the chiefest amongst all those Medicines which are wont to be administred for strengthening the Heart, and it merits the praise ascribed to it. But now instead of the Leaves of Gold, (which cannot be digested or concocted by the stomach, and are therefore carried forth with the Excrements without any operation,) I will substitute another Gold, which being made

suitable, and accommodated unto nature, shall be able to put forth its virtues, and supply the place of foliated Gold, in the Confection of Alkermes.

And if any one be so minded, he may omit even the grains or the berry it self (for they are not to be had every-where) and make use of this Juyce of Gold, which I am about to teach in this place, and mix it with Sugar and other Powders that are strengtheners of the Heart. For this Golden Confection of a purple Colour, doth most notably strengthen the Heart by its corroborative virtue, and the Gold it self gives a far more excellent purple or scarlet Colour than the Grains of that berry doe, which are brought us from *Mompelier*. The way of preparing the said Gold, is as follows.

Dissolve the Calx of *Sol*, or of Gold, in strong Spirit of Salt, and pour upon the Solution some three or four parts of water more than the Solution is, that so the Acrimony of the Spirit of Salt may be somewhat allayed. Being thus prepared, put thereinto a bit of Tin, and such as hath no Lead commixt therewith, which said Tin, the allayed Spirit of Salt will seize upon, and dissolve part thereof. And being also debilitated thereby, it will let fall all the Gold that it contained, in the form of a purple Powder, adhering partly on to the Tin, and part will be of its own natural colour, and settle to the bottom, but as subtile as the Atoms that fly about in the Sun-beams, and resembling little stars. When therefore the whole body of the Gold is precipitated into a most delicate and fine Powder, out of the Spirit of Salt, which will now be clear and bright: Pour off the Spirit, and take the Tin out from the Golden Powder, and wash the Powder with clean and pure water, that so none of the Spirit of Salt may be therein discerned; and being

now thus prepared, it may be used instead of Gold about the Confection of Alkermes.

Moreover, if you are so minded, you may take some pure Sugar-candy, and make it up into a syrup with weak Spirit of Salt, and then put thereunto this Golden Powder with a little Amber grease and some Powder of Pearls, and so make full as good, nay a better Confection than that common *Confectio Alkermes* is; because a greater corroborating of the powers of the Heart, and a delicater purple Colour cannot be found in any other thing than in Gold. If now you operate aright, it cannot otherwise be but you must needs attain to this purple and golden Confection.

N. B. The Tin must be very pure and clean, for by how much the whiter it is, and the acuter sound it has, so much the fitter is it for this work. And in the Composition it self you may use this following weight or measure.

Take of the Calx of Gold one Lot [or half ounce] and dissolve it in three or four Lots of strong rectified Spirit of Salt: Pour unto the Solution twelve or fifteen Lots of pure water; then to all this, put two Lots of Tin, and set the Glass that the Solution is in, upon hot Sand, and heat it scalding-hot, but let it not boil. When it hath thus stood for one or two hours, all the Gold will be turned into Powder, of a Purple and Gold-like hue, and settle to the bottom. Then having poured out the Water, and separated the Tin, separate all the Acrimony from the Powder by several washings, and so will you have it fitted for the Confection. This done, take twelve Lots of Sugar-candy, and one Lot of rectified Spirit of Salt, and as much pure fair water as is sufficient to reduce the Sugar into a thick Syrup; Hereto add one Lot of that

purple and tender golden Powder, and it will tinge all the Sugar with a Purple or Scarlet-colour. Then add likewise thereunto, two Lots of Pearls made into fine Powder, and one Quintula (about two drams and an half) of Amber-grease, mix them well together and set it by for use, as being a most efficacious Confection. And if you please, you may add to the former ingredients other strengthning and refreshing Powders. The Dose of this Confection is from 3, 6, 9, 12, 15, to 20 Grains, according as the persons are. It corroborates the Heart, Brain, and the whole Body, and doth likewise (by reason of the Spirit of Salt) allay thirst, and stirs up the appetite to food.

And thus much may suffice this time about Sawces or Junkets. It now remains that we likewise search after some select and harmless Purges out of the Metals too, and adjoyn them to the former. When in feastings (or merry-meetings) the Guests are wont to drink Healths to their Lords, and tope off many Cups, and store of Glasses full of strong Wine, it cannot possibly be, but that their Stomachs must be stufft with tenacious and clammy humours, and the Head much oppressed with Catthars, and the Bowels fill'd with store of wind. Now here cannot be a better and more profitable way of succouring these Stomachs and Heads, thus beset with so many tenacious humours, and of helping the whole body thus corrupted by so often repeated draughts, than by a purgative Medicine, which by expelling all the evil and offensive humours opens all the passages of the Body, and again brings the so necessary respiration. We will therefore present you here with three such purging Medicaments, and those very good ones. One is of Antimony; The second of Silver and Antimony; And the third of Gold and Antimony: Each

of which, by it self, doth far exceed the other purging Medicaments made of the Vegetables.

For Metals do penetrate the Body far better, and do perform their Operations with less hazard than the Vegetables do, most of which abound with a resinous clamminess, which doth often stick to the Bowels, and cause great gripings, which is not to be feared at all from metallick purgative Medicines: which (upon this account) are to be preferred before those that are prepared of the Vegetables; nor do I contemn these Vegetable Purges, for they are good, and may be made use of, where better are not at hand.

Therefore, forasmuch as I have in my time, made trial of many such Medicaments, and have in very deed found, that metallick Purges do excel the Vegetable ones both in pleasantness and efficacy, and are far safer; I could not but commend the same above all other Purges to such as come after me, but yet leaving every one at his pleasure to make use of either these or them.

A Purge of Saturn.

Dissolve two ounces of Lead in pure *Aqua Fortis*, and pour upon the Solution one ounce of Butter of Antimony, that so they may be precipitated together into a white *Coagulum* or Curd, whereto you must put a good quantity of fair water, and stir it very well about, that it may imbibe the Spirit of Salt which was in the Butter.

Then pour off this water, and put on more, and repeat this labour so long, untill all the sharpness be washt out of the precipitated Powder. This white Powder being dried is a most excellent Purge,

educing all evil and hurtfull humours out of the Body without danger, and being administred from one Grain to ten, according as the Patient is, doth work downwards, especially when it is given in a lesser Dose. But if there be need of vomiting too, then the Dose may be encreased, especially unto those that can brook vomiting, and cast with ease. It may be used without danger as a good and safe Purge, in all such Diseases as purgative Medicaments are, and may be administred.

A Purge of Lune.

Dissolve two ounces of pure Silver in four ounces of *Aqua Fortis*, and pour upon this Solution one ounce of the Butter of Antimony, which together with the Silver will go into a white Curd, as we said but now of the Lead in the preceeding Process. Wash this Powder with common water, and dry it and administer it in the same Dose as the Saturnine Powder is to be given; and it will perform its part in all Diseases, but especially in those of the Head.

N. B. The Butter of Antimony must be made of the *Regulus* of Antimony, with rectified Spirit of Salt, and not with *Mercury* sublimate, as the common custom is.

Purging Gold.

In the first place, you must make a most strong Spirit of Niter thus, *viz.* put equal parts of calcined Allum and good Salt-peter into a well coated Retort, out of which is to be drawn (leisurely and by degrees into a very large Receiver luted on to the neck of the Retort) a Spirit, which will make the Receiver look red. All the Spirit being distilled, let the Fire go out of its own accord, and leave on the Receiver so long

till all the Spirits are setled, and that the Receiver be become clear agen: Macerate the Lute, which joyned the Receiver on to the Retort, with water, and have an especial care when you take off the Receiver, that none of the Lute fall into the Spirit. Put the Spirit in a strong Glass, and shut it up well with Wax, that it may not exhale, for it is very strong, and is red as Bloud, because it had no water put unto it in the Receiver.

Pour two ounces of this strong Spirit upon one ounce of the Butter of Antimony, and it will presently pass into a red Solution, whereto put one ounce of pure Gold that it may be dissolved, which Solution will be redder than Bloud. Then pour in thereupon some common fair water, and the Antimony and the Gold will precipitate into a Purple Powder, which is to be washt well with water, and so dried.

Its Dose is from one, two Grains to six, (according as the Age and Party is,) it may be given in Wine, Ale, Water, or any other Liquor, which may be as a Vehicle unto it. It works without any danger, and doth safely and pleasantly (beyond all other Purges) drive out all offending Humours out of the Body of Man.

Aurum Diaphoreticum*, or Sweating Gold.*

If no water be poured upon the just-now-spoken of red Solution, thereby to precipitate the same, but that that strong Spirit of Niter be drawn off by a Retort, it then takes from the Antimony its purging and vomiting power and makes it Diaphorical. Nor needs the Purple Powder, when it's taken out of the Glass, any washing at all, because being administred in two, three, four, five, six, or ten Grains Dose it may

be safely taken, and it provokes Sweat. It is therefore very profitable in all the Diseases that are to be expelled by Sweat; yea in the Leaprosie, Gout, Dropsie, French-pox, Plague, Scurvey, and in all Feavers doth it play its part even to admiration, for (by reason of the Gold which it contains in it) it doth both provoke Sweat, and strengthen the powers of the Body.

The former Powder or purging Gold, being mixt with an equal weight of purging *Lune*, or purging *Saturn*, and molten in a Crucible, turns into a red Stone or Glass, of which, little Tablets or Pellets somewhat bigger than a Pea may be again cast or molten, and kept for use. And now when there's need of purging, let one of those Tablets be put in to some spoonfulls of Wine and lie therein all night, and let the Wine be drunk off in the morning following, just after the self same manner as other purges are wont to be administred. For there is so much virtue extracted by the Wine out of the glazen Tablet as to give several Stools. If one Tablet or Pellet be not sufficient, then may a second, or a third, or more be adjoyned thereunto, and so left all night in the Wine, that so the Wine may work more effectually if need requires. The Tablets or Pellets remain good a long time, and may be many times applied to the self same use.

But if any one should be desirous of performing this labour even yet better, he may get a little Pot or Cup to be made for him of white Earth, and may have it glazed both inside and outside with this same Glass; for two or three Spoonfulls of Wine infused for a night in such a Cup, and drunk off next morning, are capable of purging you even as doth the other.

These are the effects of these purges in Medicine.

They likewise do some good in Alchymy, if all three of them, *viz.* the Saturnine, the Lunar, and the Solar are reduced by melting into a Glass: this Glass being Philosophically cemented somewhat of the Silver, Lead, and Antimony will be meliorated, and turned into Gold by the Gold.

Now for a Farewell, take this which follows. If the God *Appollo* the Inventer of Medicine, would bestow his light upon any one, and by his hot Beams melt the waxen Wings of the untamed, flying, and (to his Father *Dedalus*) disobedient Son *Icarus*, (and flying out of the Isle of *Creet*, over the *Icarian* Sea,) that so he might fall down into the sweet and sulphureous Sea of the Sun, and may remain drowned therein: Then from this dead Body (which is not wont to be subdued by any other means) may a most excellent Medicine be prepared. For what way soever he is handled by otherwise, whether he be turned into a white sublimate, or be reduced into a yellow or red precipitate, he is notwithstanding always corrosive; and brings more hurt than good, and therefore may very deservedly be eschewed.

Or if we did but know the way of fixing it without any corrosivity, by those three principal Columes of all Medicine, namely Vitriol, Sulphur, and Antimony, he would undoubtedly be administrable without any fear, and be withall capable of performing great matters. For then he would not stir up and cause so many purgations, and such vehement Salivations, and other hurtfull symptoms as usually comes to pass, but would bring a most speedy help to the Sick by his gentle operation by Sweat and Urine, and get the Physician a most eminent praise.

This I would have every one know, that Sulphur

has a power of killing all Corrosives, and reducing them to a sweetness, whether it be done by the dry way or by the moist. And of all Sulphurs, a Vegetable Sulphur is the fittest, which being freed from its inflamable nature, is capable of reducing [any] Corrosives, though never so great, unto a sweetness in one hours space. Nay more, any Metal being first dissolved in such like Corrosives, doth together with the same become a sweet Medicament: And so when Gold is dissolved in Spirit of Salt, and Silver, Tin, Copper, Iron, and Lead are dissolved in *Aqua Fortis*, and that that Corrosive Dissolvent is transmuted by a sweet Sulphur, it so comes to pass that the Metal together with the Corrosive is made a Medicament, and becomes potable. Such potable liquor of the Metals, (but especially of Gold and Silver,) and void of all Corrosivity, will you meet withall in my Medical-shop; which liquor, as well those of Silver, and Copper, as that of Gold, are red. The Liquor of Gold may be used instead of *Aurum Potabile*, and it guilds Quicksilver and the other Metals with a golden Colour, like as the Silver-liquor guilds *Mercury*, and Silver [or Copper, probably] with a Silver Hue; and the Coppery-liquor guilds *Mercury* and Iron with a Coppery Colour.

N. B. Aurora being inflamed with the love of *Jupiter*, and withdrawing him together with her self into Heaven, if both of them be again thrust down headlong by the other Gods into the Salt-Sea, they come forth out of this Bath, so delicate and so white, that she resembles the fairness of *Diana*; and he, the comliness of *Apollo*: but not as yet constant in the Fire. But when the time of bathing is over, *Mars* coming to the Sea Shore, draws both of them out upon a dry Island called *Irony*, from Iron; where they are yet once more washt by *Vulcan*, (who makes use

of *Saturns* help) in a dry Bath, who washeth off the Defilements far more accurately than the Salt Sea could, for he leaves not off washing and purging them, untill all the Defilements are separated from both their Bodies, and that they be made like unto *Diana* and *Apollo*, in Constancy and comeliness.

Mars seeing that his Sister *Venus*, and Brother *Jupiter* did come forth out of the Salt Sea with so lovely a fairness, leapt thereinto himself, that so by spending some time in washing, he might rinse off those black Defilements from his black Body. But there was such store of filth washt off, as made all the Sea green and sweet, and it hid [or swallowed up] *Mars* himself, being now much diminished, insomuch that he could never have escaped out of that Sea, had not *Sol*, out of meer pity on him, dried up the water of the Sea, for old limping *Saturn* to come unto him, and to take poor wretched him out of the Dirt and Mire, which he also did.

But because there was such a deal of Mire and Filth as that this (slim) lame, (hopping Fellow) could not get out agen, he even there stuck fast with *Mars*, and so lost his Life. Of the dead Bodies of these two, *viz.* of *Mars* and *Saturn*, *Vulcan* did at length make one Head having two Faces, or a double Countenance, one resembling *Apolo*, the other *Diana*; and upon this account was the name of double-visaged *Janus* bestowed upon it by *Vulcan*.

By these few and short Operations and Processes, may any one make and devise many more such like. I am not at this time, for my part, minded to busie and trouble my self about any more tedious a description of such matters, for I guess that in what I have already said and disclosed to the unthankfull, I have too much exceeded my bounds. Every one may

choose to himself those things which he shall deem most profitable, and forbear to despise that which he shall not be capable of apprehending the meaning of.

'Tis a usual Proverb, *That a Cup of generous Wine must accompany Dainty Delicates*.

Because therefore we have in the three precedent Sawces or Junkets, presented you with fine savoury Cates, it is but fitting that we accompany the same with three dainty draughts, and those drawn out of the best of Metals too, namely out of Gold and Silver, because the Cates or Sawces themselves were composed of the same. Our Ancient Predecessors called those Drinks of old time *Nectar*, or the drink of the Gods, which in our days are known by the names of potable Gold, and potable Silver.

Concerning these two, do many of *Ignoramus* his Fraternity babble many Stories, and falsly boast that no true potable Gold can be prepared, or be in Being without the Philosophers Stone. This conclusion of theirs is clearly untrue, for a Man may easily make Gold and Silver potable, though he hath not any knowledge at all of the universal Medicine, which is to be thus understood, *viz.* when the Gold and Silver either alone or conjoyned, are dissolved in a sweet and not Corrosive *Menstruum*, and rendred fit to be administred to the Sick in Water, Ale, Wine, or any other Liquor. For those kind of Solutions may be taken for a simple potable Gold and Silver.

But now for any one to dissolve Gold in that corroding *Aqua Regis*, or Silver in *Aqua Fortis*, and then to imagine that he hath potable Gold and Silver, he is altogether in an Errour. Potable indeed they are, because they may be drunk like other Liquors: But forasmuch as those kind of Solutions do corrode all things, and bring extream Detriment, they are

justly rejected, and the rather because being poured into Wine or Ale, they defile and thicken the same; which, no true potable Gold dissolved in a Not-corrosive *Menstruum*, will do, but when 'tis mixt with Wine, Ale, or Water, it remains bright and clear. Besides too, true potable Gold must be of such a property, as to have no visible corporal Gold producible thereout of, and yet notwithstanding, be able to indue the meaner Metals, yea and *Mercury* it self with a golden nature, if they be therein boiled, or to coagulate and transmute them into Gold by the dry way in a Crucible, whether it be done with profit or without profit [it matters not.] Now this tinging virtue comes not from corporeal and dead Gold, but from a spiritual living and ringing Gold.

If therefore the common and corroding solution of Gold, cannot be accounted for a true *Aurum Potabile*, and that the spiritual and tinging Gold, which is dissolved without any corrosiveness should not come under this Title neither, whence I pray should it be sought for, and where should it be inquired after. I confess, I do easily perswade my self, that as for the first Ens of Gold if we did but know how to wash and purge it in such wise, as that being turned into a bloud red liquor, it would admit of Distillation by an Alembick or a Retort, we should have a better potable Gold. But where shall we find such an Artificer, as can teach us the way of preparing such a potable Gold? 'Tis therefore our best way to content our selves with such Medicaments as we have at hand, so long untill God bestoweth better upon us. This likewise I believe, that if we did but know such an Artifice as to wash and purge Mercury, in such sort as that it might pass into a ponderous and sweet Water, and if we could so adjoyn some pure Gold thereunto instead of a ferment that they might lift up

[or sublime] themselves together, and again become constant and fix: that then, from them would arise a red and soluble Carbuncle, or true potable Gold. But these are onely my simple thoughts and conceptions, no dispraise to those suppositions which other men have entertained concerning this matter. So likewise if spiritual Gold, and the spiritual Sulphur of the Vine be conjoyned by the help of Salt, they give a good potable Gold, which contains in it Gold potentially, but not actually or palpably, as may be seen in my Treatise of the true *Aurum Potabile*, which being clear like Water, and a bright or fair potable Gold, I do adjoyn to my Cates or Sawces instead of White-wine.

But even as White-wine the longer it is kept, the yellower it grows, so likewise white *Aurum Potabile* doth not retain its whiteness above two or three months, but becomes more and more yellow, and is at length turned into a redness, but still retains its tinging faculty. He therefore that shall not be well pleased with the tast of [my] Wine or potable Gold, let him tarry till being more old they become yellow or red, for then they are of a pleasanter tast, as having (through long Process of time) lost their Sulphureous Tast.

But as touching the manner of making that potable Gold, as also all other unpleasant, sugacious, and unripe metallick Potions, pleasant, ripe, fix, and sweet Liquors, that shall be revealed afterwards.

Furthermore, I do here serve out instead of a good drink, the golden-coloured Soul, or my Tincture made of Niter, of which I have spoken in the second part of my Spagyrical Dispensatory. It is of as much virtue in Medicine as that potable Gold is, which I made mention of but now, but performs nothing in

Alchymy or in the Transmutation of Metals; but what it would do if it were made fix and constant in the Fire, I do not as yet know, for I have not as yet brought it to that pass. But how it may be made fix shall be presently shown. This very Tincture in the degree it is at present in, produceth great effects in Medicine, yea and greater too than those which I published about it, in the second part of my Spagyrical Dispensatory. It is of a delightfull Tast to the Palate, it removes the obstructions of the Liver, Lungs, and Spleen, it provokes Urine, expels the Stone, prohibits Obstructions with the Excrements, it may be most safely used by old and young, yea even by those whose strength is much debilitated, and it is wont to afford them present help; it wonderfully Corroborates, and makes all Animals, Minerals, and Vegetables fruitfull, and this will easily appear so to be, if you do but take some Vegetable Seed and macerate in the same, and then put in the Earth, it grows far speedier and ripens much sooner than other Seeds are wont to do.

I have sometimes macerated Wheat, Barly, Pease, and the Seeds of such like Corn in this Liquor for a night, and being thus steeped, have sown it in pure Sand, and they have grown ripe far sooner than those which have been planted in good and fat Earth: which is such a thing, as hath made many Men extreamly to wonder, when they saw Corn grow in bare Sand without any other Earth or Dung, and be able to arrive to such perfect maturity.

Many other Salts there are of no great cost, and such as are to be had in vast quantity, with which, Corn being macerated and sown in barren Lands, and in such as are not dunged doth come to perfect maturity; and this I have tried not onely once, but

oftentimes; and have also purposed (if God please) to bring it into publick use, in these United Provinces: to which end, the most Supreme Orders, General and Provincial, have granted me a Priviledge (or Patent) for many years; whereby it is forbidden to sow or plant barren, sandy Grounds and undunged, after this kind of way, without my consent. The main Basis of the knack lies in Sea-salt, which may be plentifully had in these places, and be easily prepared and made use of (to fatten lean and dry Grounds with) instead of Dung.

But amongst all such like Medicaments, the Tincture of Nitre bears away the Bell, for it causeth many Stalks to spring up out of one Grane, and to yield fruit, a thousand fold. Nor doth it onely make the Vegetables fruitfull, but Men too, and the terrestrial Animals, and even the Birds themselves that live in the Air. And by the same reason also may it be brought to pass, that even the Metals may be multiplied by the help thereof, as we shall declare anon, in what follows.

Both these Wines or efficacious Drinks doe very well suit with the metallick Sawces or Junkets, they heat the Body, help the concoction of the Stomach, corroborate the Spirits, give good Nourishment, drive forth out of the Body the superfluous Excrements, in a due manner by Stool and Urine, they cause Chearfulness, bestow a prosperous Health, give a comely Look, and change the Complexions into the Sanguine and best Complexion; in the accomplishment of all which things, that pure and golden coloured Tincture of Niter excells.

And here I must make a little digression, and set somewhat more clearly afore your Eyes, the four primary Complexions; from which the other mixt

ones do arise, according as a Man partakes the more of this or that Complexion.

Therefore as touching the Complexions, the Ancient Physicians judged thereof according to the form and colour of the Hair, and were of this Opinion, that the Sanguine Complexion which of all others is the purest, produceth red Hairs and a white Skin full of small and bright Pores, such Men being indued with hot and moist Bloud, and of a sound Constitution are diligent, learned, pious, prone to Venery, Ingenious, Chearfull, and for the most part long liv'd, but are subject to hot Diseases, as Feavers, the Plague, and the like; and do in their nature resemble the Sun, amongst the Planets, and Gold amongst the Metals.

The *Cholerick* have very black Hair, a yellowish Skin, and their Bloud is hot and dry, and they are wrathfull, quarrelsome, strong, bold, Warriours, addicted to Whoredoms, subtle, wicked, false, merciless, rejoycing at others harms, as is wont to be in War. They are tormented with raging Feavers, as also with the overflowing of the Gall, and they are of the nature of *Mars* and *Venus* amongst the Planets; and of Iron and Copper amongst the Metals.

The Hairs of the *Melancholy* Complexion are for the most part betwixt a white and black colour, and their Skin is white. They are of a cold and dry nature, quiet, laborious, musing, industrious, sincere, pious, and mercifull, inclined rather to weeping than laughter, if they hear of any mischances, they aim at Justice, and fear God without Hypocrisie, or esteem of Men. They are subject to all kinds of Diseases, are afflicted with a debility of their Limbs, and are compared to *Saturn* and *Jupiter* amongst the Planets, and to Lead and Tin amongst the Metals.

The nature and property of the *Phlegmatick* is moist and cold, the Hair and Skin white, the Wit dull, a dreaming sleepy quality, negligent, carefull of nothing, obstinate, envious, slow, and gross, and unteachable, the Body consists of thick or homely Limbs, and is wont to be troubled with the Scab, Ulcers, and cold Feavers. 'Mongst the Planets the Moon, and 'mongst the Metals, Silver, are supposed not much to differ from their Disposition.

These are the marks (as is believed) of the Complexions in Men and Beasts. But yet you are to know, that one [single] Complexion doth very rarely bear absolute sway in any Man, but they are for the most part mixt, and so the denomination is given according to the predominant Complexion.

A Man that consists of a sanguine and phlegmatick property, is as it were double complexioned, and both the colour and denomination are divided, so that from red and white, yellow hairs arise, and the Men themselves are of a good, temperate and fruitfull nature; and thus is it to be understood of other Commixtions.

But forasmuch as a pure and sanguine complexion is esteemed the best and wholsomest, the Ancient Physicians in their Cures were wont to call the superfluity of any phlegmatick scabby person, Phlegm and watery Blood: [the superfluity] of the Melancholick, sad and irksome cogitations [or pensive dumps:] and [the superfluity] of Cholerick, a mad raging brain. Now of this Phlegmatick, Melancholy, or Cholerick [person] do we make a Sanguine one, that is, a Man of a sound and pure blood. Upon this account have they ascribed this property unto their Universal Medicine, *viz.* that it does not onely change all the imperfect complexions

of Men, as the Cholerick, Melancholy, and Phlegmatick into the Sanguine; but doth also transmute all the imperfect, unripe, gross, and volatile Metals into pure Gold. For if a Medicine be of so much virtue as to convert all the Complexions into the Sanguine one, it will necessarily transmute all the imperfect Metals likewise, as *Saturn*, *Jupiter*, *Mars*, *Venus*, *Mercury* and *Lune* into *Sol* or Gold.

Now forasmuch as I have often found by the frequent Experiments that I have made, that my said Medicine, or Tincture of Nitre is wont to colour all kinds of Hair, as white, brown, black, (black I say, which may seem impossible unto many, but nevertheless is very true; for to dye white Hair with a yellow colour is a thing commonly known, but to tinge black Hair with a yellow or red colour, is a great secret) and even all other colours, none excepted, with a golden colour; and this it does while it is as yet of an unripe and flying nature: Upon this account I dare perswade my self, that if it were but brought to a fix and constant nature, it could not possibly be, but that it would bestow upon the imperfect Metals, a golden nature and perfection. But by reason of its too tender a nature, which is extreamly impatient of a Fire of Coals, I pondered upon the business more accurately, and perceived, that it is indeed a thing possible to be done, although that hitherto I never had a convenient time of perfecting of the same. And as concerning the manner how it may be done, I cannot but out of Christian Love, discover the same to my Neighbour.

During the time that I considered not the Words of the Angel in the Sepulchre of Christ, saying, *Why seek ye the Living among the Dead?* and therefore search'd about in filthy Sepulchres, in which I could

not find the Life. God at length vouchsafed to look upon me with his gratious and mercifull Eyes, and brought me into the right way, insomuch that leaving the Sepulchres and Monuments or Tombs of the Dead, I began to look for Life amongst the Living, and not amongst the Dead.

God onely is the alone and eternal Life, who bestoweth upon us the so much desirable *Sun*, (as being the Servant of God) by the help of the Air. Let us boil, roast, bake, and labour as much, and in what manner soever we please; yet shall we never find any liveliness, save from the Sun, the Servant, Minister, or instrument of the Omnipotent God. [For else] we [doe but] prepare us Medicaments destitute of virtues, of fine out-side Colours, but within, dead and full of poison, because from things wanting life, no help can be expected.

Forasmuch therefore, as we gave not life unto our own selves, neither can we defend the same against death without that one onely life coming unto us from above: it is very expedient, that, omitting the stinking dung, we betake our selves to the pure and living fountain of God, as being the Centre of all life; and doe seek for life, from the Sun, as being the great master of all the created Palace [or World.] The way of effecting this, will I reveal unto you in a few words.

If we accurately weigh with the utmost of our discretions this whole business, we clearly see it afore our Eyes, that there is no other life to be anywhere found, besides that universal life which God hath implanted in the *Sun*, and which the *Sun* sends down unto us by the help of the Air. Let any one make trial, what way soever it likes him, and he shall find this most true.

If you would putrefie an Herb or Animal in a shut glass, so that the Air cannot penetrate [into it,] there will indeed be Magots generated, but they will want life so long, untill the glass being opened, they receive life and motion from the Air. If you put Herbs, or the Flesh of living Creatures chopt or bruised in a glass, and shut it close, and keep the glass for a while in hot Horse dung, or else in warm water, there will Vermine [or Maggots] be indeed generated, but yet void of life, which (the glass being opened) will begin to stir of themselves; and so having gotten life, creep out, and become greater, and will get other forms or shapes. Place likewise in a warm place, some little Barrel half full of Wine and let the bung-hole be open, that it may putrefie and begin to wax sowre; The ascending vapour will gather it self about the said Bung hole into a tenacious matter, which will yield small little vermine [or Mites,] much like those which are engendred in Cheese; and which at length will, by reason of the Air, live and creep forth. If you put a Cover over the hole, all these little Mites will again dye, because they are deprived of the Air from which Life doth proceed. Then the Cover being again taken off, and the Air admitted, they doe agen creep; and following after the Air, endeavour to get out of the Barrel: out of which, if they doe but stay some hours onely, and feel the full Air; They attain to another form, and get wings and fly away, which cannot be done without the Air, seeing that without it they can have no life.

Let such Earth as hath Seeds sown therein be so covered over, as that the Air cannot penetrate into it; which being shut out, nothing will be brought forth: or let it be some Plant, which hath already sprouted up out of the earth; if you doe but take the Air

therefrom, it will cease growing and plainly wither and come to nought.

From whence it is clearly evident, that the rise of all Life is to be imputed to the Air, which very Life it self, the Sun hath first wrought in the Air, and Art knows how to extract the same again thereout of, by a certain Magnetical way, and make it visible, palpable, and sensible.

But all the Air is not meer life, but contains this same life dispersed, or dilated in it, like a great deal of water containing in it but little Salt, it self being visible, but the Salt which is therein, invisible. And just so is the life dispersed in the bodies of Men, and other Animals, and, being invisible, hath its habitation in the blood, so that, without it, the whole body would be immovable and remain dead. Now when either a Man, or any other living Creature is conversant in the open Air, he attracteth to himself by his breathing, (by a certain Sympathetical power and property) as much Air as is requisite for the Heart, (which is the Center, Receptacle, or House of the Life) for the nourishment of the spiritual Life, and as for the residue, and unprofitable part, it casts it away by the Antipathetical virtue and property of the out-blowing (breath or) expiration. So that no Man, no Animal, no Herb, no Mineral, can possibly enjoy a living and growing faculty, if this food of Life were withdrawn therefrom. Which seeing it is so, and cannot be otherwise, it doth necessarily follow, that the true universal Medicine cannot be prepared in any shut up (or close) Vessels as is commonly done. Do but look I pray upon the Birth and Generation of Salt-peter, the Body of which is nothing else but the essential Salt of the Vegetables, Animals, or Minerals, which attracteth to it self the

Fire out of the Air, as is well known.

Therefore, whereas all Salts are wont to be turned (by the help of the Fire and Air) into burning and live Salt-peter, and that no body can bring the same to pass without Air: we should by good right learn from thence thus much, *viz.* to endeavour to make our Medicaments too, alive by the Air. For a Medicine that is destitute of life will subdue and destroy a Disease even just as much as common Salt will overturn a Mountain, and throw it out of its place, without being animated as it were by the Air, and transmuted into burning and living Salt-peter. Truly therefore and by experience do I say, that all the faculty of growth, all Transplantation, and every life owes its birth to the Air, and without it do they all become dead and so remain.

The Air receives [its] vital food from the Sun, and the Sun derives its Original from God, the Center and Beginning of every Life. And therefore when we are desirous of extracting that vital food out of the Air by the help of Art, and of reducing it into a visible body, it is behoovefull and expedient, that we expose thereunto a certain Magnet, which may draw the same unto it self, and be by little and little augmented therewithall, and may grow both in quantity and virtue, even as an Herb out of the Earth; or as an Animal gets it self growth and encrease by meat and drink, and adds to it self an augmentation of strength and greatness, and at length associates it self unto [or couples with] its like, and multiplieth its kind.

Man himself doth without intermission attract to himself the Air, by the help of his Lungs; but the Heart retains onely the vital food thereof, and rejecteth all the rest like so much excrement. The

Body it self also doth daily assume food and sustenance by the Mouth, but the Stomach transmits the nutriment that is separated thereout of, to the Liver, to be reduced into blood and flesh: but the Excrements, as the Dung, Urine, Sweat, and the like, it banisheth out of the body by the usual passages. Thus like wise stands the case with our Medicament. According as the Magnet is, that we expose to the said Air, so accordingly doth it attract its like out of the said Air, whereby it may get to it self, Life, Virtue, and Power. But it cannot possibly be, that it should extract that virtue and faculty simply pure and clean; No, but it gets to it self also a certain, unprofitable, and watery Essence, which is associated unto that [virtue,] which acqueity doth again go off, as a superfluous Excrement, and must necessarily bestow the Life onely upon the Magnet, that it may be therewithall encreased and strengthened. If I desire to have a Vegetable, then must I sow a Vegetable Seed; or such a Magnet is to be placed there, as may associate or adjoyn unto it self its like out of the Air. If you would have an Animal, then an Animal Seed, or Animal Magnet is to be used. But if that which I seek is to be more pure, and more constant [or lasting:] a purer Magnet must necessarily be exposed; for like doth always seek its like; love, o'ercome, and conserve it: according to the testimony of the Ancient Wise men, *Nature rejoyceth with Nature: Nature overcomes Nature: Nature retains Nature.*

And therefore seeing our purpose tends to this, namely, to extract the invisible faculty of Life, the power and virtue of the Sun out of the Air; to concentrate it, and make it corporeal, visible, and palpable; It behooves us to provide our selves with a

fitting Seed or Magnet, which may earnestly attract, overcome, and hold the same. Now such Magnets are pure Gold, and the most pure Soul of Salt-peter, both of them being the true off-spring of the vivifying Sun.

Because therefore like desires its like, loves, and seeks after it, a poisonous Magnet must not be exposed [to attract] a vital food: For as is the nature of the Magnet, so likewise doth it attract good or evil out of the Air. It is a thing that Husbandmen are well acquainted withall, namely, that Wheat produceth nothing else but Wheat, and from Tares do Tares arise. If the Seed or Magnet be aureous and pure, it will also acquire to it self pure and golden Virtues, and be encreased by them.

The manner of so placing the Magnets, that (by Solutions and Coagulations) they may receive the Astral and vivifying Rays of the Sun, and may render them visible, corporeal, palpable, and durable in the Fire.

You must get made some flat and strong glass Dishes or Platters, in which you must put your Magnet the thickness of half a fingers breadth, and expose it moist to the Sun, that the unprofitable humidity may vanish by evaporation. Which done, (and in the Summer time it will be done in a few hours, especially if there were not too much of the Golden Liquor put into the Dishes) expose the same Dishes, which contain in them the [thus] dried Salt, in the night-time, open to the cold and moist Lunar Beams, that the Salt may by its magnetick virtue associate unto it self from the Air, the Water, which carries in it the universal food of the Air, and consequently may be dissolved. This Solution is to be agen set out in the day-time to the Sun-beams, which will again

dry up the unprofitable moisture, and leave in the Salt, that vivifying and golden Seed, which it contracted in the cold Night and Air, together with the humidity, which is void of any virtue. The Salt being freed by the Sun from its superfluous moisture, must be again exposed at Night to the Lunar beams, that it may again imbibe the Astral virtues, and may be agen dissolved in the imbibed water, that, being the next day, as the day afore, exposed to the Sun, it may be animated anew with those same virtues: These exposings by turns [to the *Sun* and *Moon*,] must be so long and so often repeated, untill the said Magnet, (after its being dried at the day time in the Sun) will, at the nighttime, hardly admit of any moisture from the Air, and that being dry and put upon a red-hot Plate, it readily melts without fume. For then may it be applied to use, as being a constant and fix Medicament.

This interchangeable Solution and Coagulation must be repeated some hundreds of times, and every Solution and Coagulation is to be accounted for a Philosophical day.

If now in the Summer-season the heat of the Sun be not strong enough in our Countries for the effecting of this operation, the said heat may be concentred by Glasses, or metallick Instruments, and be made more efficacious, that the Coagulation may be ripened [or hastned.] But in defect of such Instruments, and want of the heat of the Sun, which is frequently over-cast with store of Clouds, you may easily forward the Coagulation with our Common Fire, and that too with a more unfailable and speedier operation than that is, wherein the drying up by the Solar heat is always to be waited for. And although this operation, which is performed in the

Sun, is to be accounted of as far the better, yet notwithstanding the *Sun* doth operate together with our Common Fire after an invisible manner, when we cannot make use of the *Sun* it self. For wheresoever the Air is, there also is to be found the invisible *Sun*, and the occult virtue and power of life. He that can have the opportunity of using the *Sun* in this operation, needs not any other Fire. But the using of our Common Fire requireth a peculiar Iron Furnace, whereon the Dishes or Basons are to be placed to dry. But yet the heat must not be underneath, and strike at the bottom of the said Basons, but it must be such as may strike the heat downwards at top of the matter onely, and may gently and by little and little consume the humidity: For else there would be hazard of the Liquors boiling over, and of being lost, if the heat should be placed under the bottom of the Dishes. The Iron Furnace may be made of Iron Plates, resembling Arched work, [or Oven like] and be placed within a Stone Furnace, and have a Door fitted thereunto, that so neither Dust nor Ashes may fly thereinto, and by this way will the Salts be dried in two or three hours time. And now, that you may not need to wait till the night approacheth, you may have a wooden Box or Chest made, and covered over at the top, but pierced full of holes all round about the sides, which (with the Basons placed therein) may in the Winter-season be set abroad to the cold Air, and in the Summer-time may be placed in some moist Cellar, that so the Salts may attract from the Air the food of Life. For in all places of the World doth the Air contain in it (though in one place more plentifully, and better, than in another) that occult faculty and virtue of Life, without which, neither Men nor Animals are able to live. But by how much purer the Air shall be, so much the purer and more

excellent is the acquired Medicine. As for the Transmutation of Metals, it matters not much what Air it is that you get, for every sort of Air is fit for this operation. We doe in this place manifest onely the way of fixing it: Now every one knows that a pure and clean Air is better than a gross and an impure one, and that the heat of the Sun is better than the heat of Coles, or of a Lamp.

Thomas Aquinas writes, that God with his Angels cannot want our fire, and therefore is he reproved by *Paracelsus*, because he saith that God cannot want the Elementary fire. Alas, Good man, he did not so accurately weigh this matter, for this proposition tends onely to this end, namely, to set afore our eyes the purity of the Fire necessary for the Coction of our Medicine. From whence it is sufficiently manifest, that a Medicament will be so much the better, by how much the purer the Fire shall be. For a gross Air begets a gross Blood. But in this operation, the Air is the Meat and Drink of our Golden Salt, but the Water or Phlegm is to be driven away by heat, it being a superfluous Excrement adhering on to that Air. Now in those manifold Solutions and Coagulations, the Magnet doth always retain some good thing, and encreaseth both in weight and virtue, and attaineth a constancy: like as Men and other Animals are encreased with Meat and Drink, and doe grow in stature, and multiply themselves. The whole work therefore of making this kingly Medicament by the help of the secret Solar fire, doth consist in a good, pure, and golden Magnet, and afterwards in a true Solution and Coagulation: Which if it be too speedy and strong, the over-much heat will burn up and consume the attracted food of Life. If therefore a Medium be not used, it so happens, as 'tis wont to be in any Earth that is too moist, and therefore not

[capable of] bearing fruit. So that nothing is more necessary than to have a due regard of mediocrity, not onely in the Solution, but in the Coagulation likewise.

And this is that way by which the Solution done in the Air, and the Coagulation made in the Sun, doe reduce the Mercurial water, and the Minerals prepared with Salt into fusile and tinging Stones; which thing the Common fire will never perform in a glass closed up, and without the Air.

Note this, and believe it, and doe it, and thou wilt find what thou hast believed, come to pass.

Supper being ended, and the Drinking-bout over, 'tis time for the Guests to go to Bed, unto whom the custom of some is to present a closing Cup, made of good and profitable Herbs, 'mongst which, such as are more bitter, are for the most part in greatest esteem, because they close up the mouth of the Stomach, and beget a quiet Sleep.

Now to parallel this Custom, I will here set one down, for those that are desirous of such like bitter Potions, and such an one as they may prepare according to their pleasure, and apply to use.

Take of common *Aqua Fortis*, which you must rectifie by a Cucurbit, or by a Retort, that it may be bright and clear. Dissolve therein, by boiling in hot Sand, as much cupellated Silver as it will dissolve; but you are to note here, that there must not be any Copper at all in the Silver, for it would spoil the Medicament. Into the Solution pour strong and well rectified Spirit of *Sal-Armoniack*, so long till the *Aqua Fortis* makes no more Ebullition. When all the tissing and noise is over, there will be about the half part of the Silver precipitated, and settled to the bottom,

and will be of an ashy colour. Place the Glass in Sand, put Fire thereunder, and boil the precipitated Silver with the *Menstruum*, in which boiling there will separate yet more Silver out of the *Menstruum*, and the residue will remain dissolved up in the *Menstruum*, which is to be filtered through Cap paper, and then to be evaporated by little and little in Sand, that all the humidity may be abstracted.

N. B. The *Aqua Fortis* and Spirit of *Sal-Armoniack*, turn into a liquid and volatile Salt, and have lost their corroding property, which Salt hath introverted the Silver, and drawn its bitterness forth, insomuch that both Salts are converted into one bitter and green Salt. This Salt must be dissolved, filtered, and purified by pouring Water thereon, and again drawing it off; and being hereby rendred more pure, it resolves it self in the cold Air into a green and bitter Liquor, one drop of which is able to make a whole Cupfull of Wine bitter. And this Wine being drunk is profitable to the Stomach, causeth quiet Sleep, dissipates Windiness, and keeps the Belly Soluble.

N. B. This Salt guilds over Glasses, and other glazed Vessels with Silver, nor does it vanish away but remains constant. It likewise performs other considerable effects in Alchymy, as may be seen in my other Writings, but especially in the second part of my Furnaces, of the last Edition. And thus do I leave the Guests to their rest, that they may Sleep even till broad Day-light.

The Sun being up, and some of the Guests being very droughty or thirsty with their Yesternight Surfeiting, and being tormented with overmuch Heat; they endeavour to extinguish this Inflammation of the Liver, with cold Fountain Water, or with small

Beer, or with hungry and sharpning Wine. Others send to the Apothecaries for some Syrup of Roses, or Violets, and mix that with Fountain Water, and so drink it off. But the burning hot Liver is presently smitten with a sudden horrour, the Stomach is refrigerated, and beset with clammy Humours, and most an end the Limbs are debilitated, the Skin becomes Scabby and cold Feavers possess the Stomach. Instead therefore of such like drink, I will here substitute a far better cooling Potion, which shall not hinder the health, as those do, but be profitable to the same.

Take one pound of Spirit of Salt, not of that yellow, unrectified Spirit that is sold in the Shops, but of our well rectified Spirit; wherein dissolve as much Tartar as it will associate unto it self in a gentle boiling; filter the Solution through Cap-paper, that so all the Fœces which were in the Tartar, may abide in the Paper, and the Spirit of Salt itself together with the [dissolved] Tartar may pass through, bright and clear; if the Solution stands long in a cold place, part of the Tartar will shoot into Crystals, and part thereof will remain mixt with the Spirit of Salt, and give it a gratefull vinous Acidity. If you use white Tartar then the said Spirit will remain white, red Tartar tingeth the same with the colour of a Ruby. *N. B.* The Spirit of Salt is of such a nature, as that it makes all colours more fair. You may therefore use red Tartar to make this Potion withall, because of the loveliness of the colour, wherewith it tingeth the Spirit of Salt, for as to the virtues and efficacy of them, there is no difference to be found between them.

This Tartarized Spirit of Salt is very sweet, and tasts like an acid Wine, some drops of which, being

drunk in cold Fountain Water, will not at all hurt the Liver: nor will it onely allay the droughtiness and thirst, but also stir up in the Stomach an Appetite to meat and drink. And therefore I do commend this Tartarized Spirit of Salt, beyond all other thirst-allaying Remedies, and it may be taken safely and pleasantly, both *Summer* and *Winter*, because the unripe and acid Wines being drunk with Fountain Water and Sugar, do refrigerate the Stomach, and load it with tenacious humours, and weaken the Appetite, and hinder digestion.

Most profitable therefore is this our Spirit unto those, who daily drinking much Ale, may always mix a little of the same with their Ale. For it makes the Ale to tast like an acidish Wine, it allays thirst, so that there will not need such a guzling in of so great a quantity of thick Ale, it discusseth Wind, expells Urine, hinders the generation of the Stone in the Bladder and Reins, and if it be already generated it dissolves and consumes the same, and by little and little drives out the same with the Urine. Being administred to such as are troubled with the Feaver, Gout, Stone, and Scurvy, and that in all their drink, it is a pleasant and profitable Remedy. Concerning the use of which, you may find more spoken in my Treatise, intituled, *The Consolation of Sailors*.

Now besides all this, there is yet one thing more that I shall here admonish you of; namely, that by the Spirit of Salts help may a Remedy be administred to many more hurtfull disorders, but especially in the stead of those sharpish Waters, unto which, Men are wont to come from far and undertake long Journeys, losing their most pretious time and Money, neglecting their Calling, their Houshold Affairs, their Wife and Children, upon the bare hope of recovering

their former Health: Whereas notwithstanding, the Spirit of Salt well prepared with Tartar, and having a little Steel Powder put thereinto, will perform the very same effect as the Calibeat Waters are wont to do, and so they may avoid the loss of so much expences, and of their pretious time; and thus every one may discharge and follow his own Calling and Domestick Affairs, and yet for all that, be cured by the help of the Tartarized and Chalibeat Spirit of Salt which openeth the Obstructions of the Liver and Spleen.

But what shall I say much for? Some haply there are that go the more willingly to those Waters every year for other reasons. Such as have old chiding Wives at Home, that take it very ill if their Husbands do but stir out of Doors, and are continually a plaguing them with Scoldings and ill Words, have not these think you great reason to seek some Diversion?

Young Women also love to visit these Waters and Baths, who meeting not with so much heat in their feeble and aged Husbands, as to beget them with Child, betake themselves to those Waters and Baths, where at all times they meet with active strong Companions, full of strength and Metal, who without doubt do frequent the said places, for this very end, namely, to apply warm suppositories to those cold Women, and uterine emplasters to make them Fruitfull, and to take away Sterility. Such kind of Dames being restored to their former health, and returned Home, their Husbands find (after some few Months) how effectual the use of those Waters have been upon their Wives.

Besides, it most an end happens that the Master and Mistress being absent, the Houshold Affairs are

very awkwardly administred and managed by the Children, the Men-servants, and Maid servants; and that common *German* Proverb doth usually take place; *The Cat being out of the way, The Mice upon the Shelves do play*. The truth of this is sufficiently testified by frequent Examples. And therefore it is much better to drink these acid Waters at Home, whereby both Money and Time is spared, and many evils prevented. And thus much may suffice to have been said concerning a refrigerating Drink.

And now, seeing we have at hand good Cheese and Butter, good Sawces or Cates, and delicate Drink, can we not be here with content? Verily in my Judgment here's enough disht out for one Banquet. But some may say, in very good time! *Glauber* [indeed] does not onely teach us the preparation of good Meats, but likewise of Cheese, Butter, Sawces, [or Junkets,] and pretious Wine, but yet tells us not from whence the Milk to make the Cheese and Butter withall is to be had, nor whence the Sugar and Spices for the Cates, and the Grapes needfull to make the Wine with, are to be gotten? What benefit have we by knowing how to make Cheese and Butter, and yet want Cows to yield us Milk? To satisfie these, we will demonstrate unto them, that even both the Milk it self, and the precious Spices, and most excellent Grapes are all attainable by the help of Salt.

In my Treatise called *Miraculum Mundi*, as likewise in that called *The continuation of the same*, and in that Book, *of the nature of Salts*, I have clearly enough shown, that all the faculty of the Growth and Nourishment of all growing and movable Creatures doth take its rise and original out of Salt alone, and that the correction or melioration, not onely of Vegetables and Animals, but even of the Minerals

too, is to be sought for from the same.

But forasmuch as this bettering of the Metals meets with but little credit and is very hardly believed and understood, (nay 'tis plainly thought a thing impossible to be effected,) I could not choose but manifest and demonstrate the truth of the same unto the whole World; namely, that like as the Metals are in long process of time maturated by Salt in the Bowels of the Earth: Even so may the same be likewise maturated, mundified, and amended out of the Earth, by Salt, by the help and benefit of Art; not onely by the moist way, but also by the dry, and that with one Fire, in one Furnace, and with one Servant, whom I will in this place call *The Countryman paying his yearly Rent.* When his belly is continually fill'd with Coles, his Plows never cease going, so that weekly, monthly and yearly he is able to pay his master the due hire, namely Gold and Silver, wherewith all things necessary for houshold expences may be gotten.

And although this Countryman, which I will here describe, be not that [great] Country-Farmer, which I have mentioned in the *Third Part of the Prosperity of Germany*: yet notwithstanding he is a little one, and one that will discover so much unto the ignorant as to cause them to believe that the things which I speak of are possible to be done, and that there is a yet richer and better Countryman. But this here is to be accounted as a small Cow, and which will however supply you with Milk, Butter and Cheese, for necessary uses, if not with Sugar, Spices, and Wine too, to be set out upon the Table. If this Country fellow be too little and small for any one, he may even provide himself of a better, and learn by the consideration of this, by what means such

Countrymen are to be nourished, that so the Rent may be gotten from him in its due time.

A. *The little Country Tenant with one Plow.* B. *The Countryman with three Plows.* C. *The Countryman's Cap.* D. *His three Plows.* E. *The Registers to govern the Fire by.* F. *The Glass set in with his Alembick and Receiver.* G. *The Door to shut the Crate.* H. *The Ash-hole.* I. *A Basket of Coals.* [See the Fig. before the 3d. p. of *the Prosperity of Germ.* noted with pag. 76.]

In the first place you must prepare you some pounds of good Spirit of Salt, after the way which I prescribed with Vitriol, without which it will effect nothing, for out of this [Vitriol] it doth in the preparation carry over with it the spiritual Gold, or tinging Spirit, which said [spiritual Gold] is, in the performing of the operation, fixed, together with that spiritual Gold, which lyes hidden in the inferior Metals, and so becomes manifest.

Then (in the next place) you must build you a Furnace, which is called by the Chymists the *slow Henry*, or *dull Harry*, but I call it *The little Country Farmer* or *yearly Renter*: you may build it, I say, of what bigness you please; or for Example sake, the Tower which holds the Coles may be about Man-heighth, and about one Cubit broad in the inside, but so, that the top part and bottom part be narrower, and the middle part wider. To this Tower you must adjoyn two or three Furnaces, which are here called the Countryman's Plows, and in which the Vessels are to be placed, which hold the Metals that are to be maturated by the Spirit of Salt, and which have a continual heat, whereby the never-ceasing coction is holpen from the Tower that contains the Coles. Now see that you make all things cleverly and well proportioned, whereby that the Fire may be well and

commodiously governed, and may be conserved for twenty four hours at least, without any looking too or medling with, as may be seen by the now described Figure.

The Vessel, in which the Spirit of Salt, with the Metal, is to be exercised (or laboured) with a daily Coction, must be made of such matter as doth not flie with the heat of the fire, nor is not eaten with the sharpness of the Spirit, (but) such as may be seen in my Laboratory, and will for the most part dure and hold the Spirit of Salt a whole year without breaking.

All things being ready and fitted, the Countrymans Belly is to be filled with Coals up to the Neck, and his Head covered with a Cap, that the Fire may not find any out-let, save by the lower holes, through which, the heat may find an entrance into the adjoined Furnaces; and as for the Vessels, they are to be filled with the Spirit of Salt, and with Metals fitted for this Operation, and to be covered with their Alembicks, that the Spirits which ascend in the boiling may be received and conserved. When all the Spirits of the Salt are come over, they are to be again returned back upon the dried matter in the Cucurbit, and are to be agen drawn off by distillation. This operation and cohobation being often repeated, doth ripen and fix the spiritual Silver and Gold, whereby it becomes Corporeal: But yet the Spirit of Salt alone is not able to give Gold, but ripens Silver onely, but by the addition of other Salts, it will give Gold too. And even for the fixation of Silver, common Salt may be also added to the Spirit of Salt, that so the Spirit of the Salt may be made strong in the digestion; yea and in time so very strong, as to fume even in the cold Air, and therefore a little water may be also added besides the Salt.

Hence it comes to pass, that in one days digestion six pounds of Spirit of Salt will give seven pounds of the same; unto which, if you again add one pound of Water, and one pound of Salt, you shall have eight pound of Spirit of Salt: which by the addition of another pound of Salt, and one pound of Water more, it may be farther augmented; insomuch that the Spirit of Salt, by a continually-repeated addition of Water and Salt, gets a perpetual encrease, and the Metal is so far from being at all hindred in its maturation, as that it is daily ripened more and more. For the Agent and Patient are continually encreased, and become bettered both in quantity and quality, which verily is a most excellent work, and never so manifestly described by any body as by my self.

But that I may be yet better understood by every one, I will here adjoyn a way which every one may imitate, and which teacheth how, by the Spirit of Salt alone affording not Gold but Silver, the said operation may be instituted with Copper.

You must take care to have a Vessel made either bigger or lesser, of such matter as the Spirit of Salt cannot spoil or prey upon; And pour thereinto as many pounds of the Spirit of Salt as it will well hold, and as many pounds as there be [of Spirit,] so many ounces of Copper-plate must you put in, and to them add twice as many ounces of Salt, so that to one ounce of Copper there may be two ounces of Salt. The Spirit of Salt being drawn off even till the Copper and Salt be dry, it will be stronger and more in quantity, because, from the adjoyned Salt, it hath acquired to it self an encrease and greater Virtues. Pour this Spirit agen upon the Copper, which in the first distillation was wholly dissolved up; and boil

the Spirit of Salt over the fire, that the Copper, together with the Salt, which was not carried over by the Spirit in the first distillation, may be again dissolved.

The Furnace being cool'd, Take the glass out of the Sand, and pass the Spirit of Salt with the dissolved Copper through Cap-paper, and wash the white Calx that remains in the Paper with water, dry it, and melt it with a fix Lixivial Salt, and you shall find as much pure Silver, nay, even somewhat more than the Copper had in it by its own nature. Put the green filtred Solution agen into the Cucurbit, being first well wash't; of which, if there be six pounds, add thereunto one pound of Salt, and half a pound of Water, that so there may be seven pounds and an half, provided the Cucurbit will contain so many pounds, if not, then put the less matter therein. Then being placed in Sand, draw off the Spirit of Salt from the added Salt, even to dryness, and as much increase as you find it have above six pounds, lay it by, and add as much water to these remaining six pounds, which you must again put upon the dry matter in the Cucurbit, and then agen distill it off till the said matter be dry, and repeat the same Operation again by pouring on and distilling off. If the Spirit of Salt be augmented in quantity one pound, then put more Salt into the Cucurbit, and agen augment the six pounds of Spirit of Salt by the addition of Water, and repeat the pourings on, and drawings off after the aforesaid manner, always removing at each Distillation, the increase that is over and above six pound: and renewing the apposition of more Salt, after that the former is drawn off, untill you shall have gotten in the fifth, sixth, seventh, eighth, or tenth Distillation as much Spirit as you at first took, to begin your Distillation,

[which was six pound.] Now all the operation consisteth in this knack, namely, that you so operate, as that nothing flies away in fume, for all the encrease ariseth from the Salt and Water which you added thereunto. When you have gained thus much, you may (without adding any more new Salt) pour on the Spirit of Salt several times upon the Salt which is left remaining in the Cucurbit, and agen draw it off so often thencefrom, untill it hath brought over with it self almost all that Salt. Which [Salt] being almost wholly changed by the Spirit of Salt that was poured into the Cucurbit, Dissolve up the remaining Mass of the Copper and Salt, and the Sand being cold, take out your Cucurbit, Filter the Spirit through Cap-paper, and wash the white Powder left in the Paper, and dry it, and melt it as afore with a Lixivial Salt, and you shall have as much pure Silver as the Spirit of Salt was able to fix, of the Copper, in such a time. Then put this green Spirit of Salt into the Cucurbit together with more new Salt, and repeat the said labours ten or twelve times, and the Spirit of Salt will be always encreased and rendred more strong, and the Copper will agen yield forth Silver.

This Labour, you may at your pleasure, continue as long as you list, for you will always get some Silver, and have an encrease of Spirit. For both the Agent, *viz.* the Spirit of Salt, and the Patient, *viz.* the Copper doe encrease both as to quantity and quality.

But it may be demanded, Whenee that Silver comes? That which gave forth it self the first time we impute not unto the Spirit of Salt, as if by it made, no! but we say that it was in the Copper before, and was melted out of the Oar, together with the Copper, for this may well be. For there's no Copper to be found which does not hold some Silver hidden in its

belly: and though the Refiners have as accurately separated it as they could, yet nevertheless we doe conclude that that first Silver separated in the first Operation, was what was left of the Oar in the Copper, and remained unseparated by the Melters [or Refiners] therefrom, and was not made by the Spirit of Salt, but onely separated. And the Spirit of Salt being in its nature an enemy to Silver, does not dissolve it. But whence then did that come, which offered it self unto us the second, third, and fourth time; whereas in the first Solution, all the Silver was clearly taken out, and none at all left therein, but was all of it separated by filtration? What shall we here say, or indeed how shall we dare say otherwise, but that we believe and confess, that the Spirit of Salt did by its operation make the same of the Copper. Nor is there any reason why this should seem so very strange unto us, forasmuch as yearly, in the Earth, all Copper is naturally turned by Salt into Silver, and not onely Copper, but all the other Metals were at first, Salts: not such indeed as we use about our Cookery in the Kitchins, but such as are impregnated by the Sulphureous Stars [or Constellations.]

But forasmuch as we doe at present treat onely of Copper, we doe not therefore meddle with the rest of the Metals: for very rarely is Copper digged out of the Earth but it hath Vitriol therein, or, in defect of Vitriol, a Sulphur salted with a vitriolate salt. For any sort of Sulphur being burnt, and its fatness flaming, the sharp Salt is released, and passeth away in fume, resembling the tast, of the fiery Oil of Vitriol, and is captivated [or caught] in the great Alembick under which the Sulphur is burnt. This sharp Oil supplies the place of an Agent as to the Minera's or Oars, in the Veins of the Earth; and doth

more and more ripen the Minerals and Metals, but exceeding slowly: for Nature doth scarce attain to that limit in a thousand Years, which Art doth in a few Months time. For there are no impediments to obstruct the operativeness of our Agent, such as are the Stones, Flints, Sands, and various Earths which frequently occur, and are much abounding in the bowels of the [Metallick] Veins: insomuch that it can discharge its Operations freely, and without any Impediment at all: and besides too, we use our external fire by which we help this our Agent, and strengthen its virtues, and keep it in a continual action.

By all this discourse may every one see, that when we speak of ripening Silver out of Copper by the Operations of the Spirit of Salt, it is not contrary to nature, but altogether agreeable with the same. But now we doe not say that any one will suddenly become rich by this Labour, done with the Spirit of Salt and Copper, but we have described this Operation in this place, for this end, namely, that hereby the possibility of the thing may be learned, and that there may be good ground to believe, that even this too is most true, *viz.* when we write that by such or such an Agent, corroborated or fortified with such or such Subjects, and placed in such-like Digestions, Gold may be extracted as well as Silver out of the meaner Metals, which how little soever there be of, may notwithstanding prove profitable. For having once made onely some pounds of Spirit of Salt, you will not need to make any more anew, for in the digestion and maturation of the Metals, it will daily encrease, and that in a plentifull manner, and that too without any considerable costs, seeing that the Salt it self, which is to be added, is likewise cheap enough. If you make your Cucurbit of pure

Silver, (for the Spirit of Salt will not work upon that) and digest your matters therein, you need not then stand in fear of the breaking of Glasses: Besides too, you may always let such a made Vessel lie in the Furnace, and as soon as ever the Spirit is drawn off, you may presently put it on agen, nor is there any need of your waiting so long, and ceasing from the work till the Vessel cool. If therefore a Tower to put the Coals in (as afore) be added to that Furnace, or Furnaces, then is it a true Countrey Farmer, or Tenant, for the sustaining of whom, there will need no other charge but that of Coals, and yet notwithstanding he gives you a perpetual gain without labour, cost, and trouble. Nay more, if we do but rightly weigh the business, we shall find that the daily encrease of the Spirit of Salt in these labours, is easily sold for more Money than the Coals will cost, so that all that Gold and Silver which is gotten out of the Metals, doth offer it self unto us for nothing. Besides, such kind of Metals may be taken for this Operation as are wont to yield more Silver and Gold than Copper, and the plentifulness thereof will be yet more, if several such kinds of Metals are joyned together and so dissolved, and digested, in which operation they better one another by a mutual action; for one supplies what another wants, and likewise from another, are those superfluities which it has in it, taken therefrom: so that (as we said afore) the mutual melioration of those Metals may be set on foot and promoted, as it were without any cost, and by a very little labour.

Whosoever he be therefore that has the knowledge and experience of the nature and property of the Metals, which they are, that have a correspondency with each other, and that love to better each the other; and is not ignorant what Agent is agreeable to

Gold; such a one I say as this is, will commit unto his Countrey Tenant the care of Weekly and Monthly paying the due Rent, and will be able by this means to serve God his Creator without wicked Usury; to do good unto his Neighbour, to extricate himself out of that Diabolical Fellowship, of the impious and the great crew of evil Men; and to lead his Life in Tranquillity and Quietude; which verily is a great and singular gift of God, unto any one that can arrive unto such a knowledge.

But yet no Man hath any reason to perswade himself, should he be a Master of this Art and Science [here shewn,] that he shall be able daily to separate great heaps of Gold out of the more imperfect Metals, whereby he may be enabled to lead a vicious Life. No, for my endeavour shall (in the first place) be, not to make any wicked Man partaker of this Art.

And secondly, the whole business consisteth in the blessing of God, as we find it Written, *Paul hath planted, and Apollo Watered, but God hath given his Blessing*: For without this Blessing, all our Labour is but in vain: And this the Prophet *David* doth likewise testifie, saying, *In vain do ye rise up early, and being loaden with many cares, go to Bed late, and eat your Bread with troubles: For unto them whom God is favourable doth he bestow his gifts even while they are Asleep*. Moreover St. *Paul* saith, *It is not of him that wills, nor of him that runs, but of God that sheweth mercy*. And therefore a wicked Man, though he should possess so great a thing, yet would he not do any good upon it, if he wanteth Gods Blessing. Besides, I do not here bring forth my little Countryman upon the Stage, as if he could help any one unto huge Treasures; no, but onely as one that

can bestow so much as may suffice, honestly to live. Unless haply a Man should light upon rich Veins and metalline Oars, which should abound with much corporeal Gold, and so by this means should yield great Treasures. Now so much cannot be lookt for, from such Metals as have in them but a spiritual Gold onely, unless the true weight be found, and that there be gotten the knowledge of those Metals which have a great affinity with each other, and which being joined together yield forth Gold. Otherwise you must not expect ought else from this Operation save an honest and moderate profit.

But now, as touching what Metals they are that have such affinity, and what the true proportion of the weight is, no body hath any reason to enquire of me, for I do not as yet profess my self an expert and absolute Artist in this matter, for sometimes I have a very gainfull success of my trials that I make, and sometimes agen I get less.

I was willing therefore to shew the way here, of ripening the meaner Metals by the help of Salt, and that too in a manner without any costs: which way of so doing being by me laid open, may suffice for this time, nor did ever any reveal it before me (I speak it without boasting) or produce it unto publick view in so open a manifestation as I have done.

And now if this separation should be used about the fixed Gold onely which lies hidden in the Oars and Metals, yet mought great profit be thereby gotten in all places; for there is no place in the World in which there are not to be found such Earth, Sand, and Stones as contain in them corporeal Gold, which may be extracted by the afore prescribed way without any costs at all. But here is to be observed that those things which I have written, and clearly

demonstrated concerning such separatory Operations in the third part of the Prosperity of *Germany*, are to be agen read over, and well lookt into.

Moreover, this is also to be known, that this maturation if instituted by the dry way, brings more profit than if done by the moist way; for in the dry way the Agent is more holpen than in the moist way, in which there is always plenty of moisture. But however, both ways namely the dry way, and the moist may be done with one and the same Fire, nor will the cost be any more than if the moist way were made use of alone by it self.

For that Tower wherein the Coals are, and which is to keep the Spirit of Salt in perpetual digestion, and to heat the adjoined Furnaces, is always bright hot at the Grate, upon which [grate] if a cementing Vessel filled with Salt and Metals be placed, there will then be even thence as much profit as by an adjoined Furnace, and so by the Fire of one Furnace, and by the self same labour and cost is a double Operation performed, and a continual rent may be expected from the double Countryman.

You must likewise note, that there is a great difference of Salts, and that one Salt is more fit for this labour, and another for that; but by how much greater the Acrimony is, that the Salt abounds withall, so much the more potent an Agent it is: insomuch that it is of great concernment for a Man to know how to concentrate the moist Fire or Agent, concerning which Concentration there is no need of mentioning any thing in this place; forasmuch as I suppose that these things which are at present spoken are sufficient enough.

Moreover I would have the Son of Art know, that the Salt of the *Macrocosm* or of the Ocean, which we

have taught the making the Spirit of, is nothing at all so efficacious as that which is gotten out of the *Microcosm*: For whatsoever things are found to be in the *Microcosm* or greater World, the same are likewise in the *Macrocosm* or lesser World, namely, Man. But it is not my purpose to discourse farther of this thing in this place, but will (God so permitting) treat more at large of the same, if I come to write somewhat of the nature and signature of the greater World. For hereby great mysteries may be learned, which omitting to speak more of, I keep close to Salt and say, that that Salt which comes out of the Ocean or Sea of Man, or of some other Animal, that is, which is voided out of the Bladder, is far more fit for the Transmutation of Metals, than that which is gotten out of the Sea, as being the Bladder of the great Animal.

The Ancients have called the World the great Animal, and very rightly, for in its Center it hath a fiery heart by which (as being the great Animal) it moves it self, and conserves its life, as shall be Spoken of in another place if God shall permit, for according to the common Proverb, *Man proposeth and God disposeth*.

Morien was not ignorant that *Arcana's* of great moment lie hidden in Urine, but hath manifestly signified it. For when he had prepared the Tincture for King *Calid*, he wrote upon the Vessel in which it was, these words, *He that carries all things with him, needs not any others help*. And having so done, he silently betook himself unto his Cell. But he had said before unto the King, In thee O King! the Medicine is, by which words, he meant Urine. For out of Man's Urine may a fix Stone be made, which shall be manifested in other places.

Furthermore this likewise is to be here known, that it is a most notable and a true experiment and artifice in Alchymy, that is, in the true melting of Salt, when the Agent of Salt, and the Patient, or Metal, are so thoroughly conjoined and mixed, as that the Agent is disperst throughout the Patient, that so the Patient may suffer the more, and consequently that that Patient Metal may be the sooner ripened and fixed. When a Flock of Sheep being in the Fold, see the Woolf coming, they are indeed all terribly affrighted, but are not all bitten and torn, and so a part of them feel the hurt and the other part remain free. But if the Woolf seizeth upon the Sheep in the open Field, and that the Sheep are scattered far and wide so that they cannot possibly flock together, they will certainly suffer more grievously.

For Example sake, when I would meliorate Lead by means of Salt, whether by the moist way by Spirit of Salt or by the dry way by dry Salts, if now I cannot radically conjoin the said Salts and Lead together, I do but little to purpose, because Lead and Silver, unless prepared by singular Ingeny and Skill, are not touched upon by Salt and its Spirit, and so suffering but superficially onely they are able to resist a long time. But being radically united unto Salt by the benefit of Art, so as that they cannot be distinguisht from each other, then they suffer in all their parts and die, which death is their melioration and life. He that desires to arrive at this Goal, must rise betimes, and use a most notable diligence, for sloathfulness hedgeth up the way of coming thereunto: Even I my self am no perfect Artificer, but wait upon the Omnipotent God, expecting what he will please to bestow upon me for time to come, and I live content

with my present enjoyments. Thus likewise let another do.

But if now *Saturn* is to be used after another way and to serve instead of Earth to receive and multiply the metallick Seed, there's no need of dissolving it in Salts, but it will be better to have it onely swell or puft up in them, and keep in such a posture as Earth is, conserving the Seed sown therein, in a moderate humidity and in the temperate heat of the Sun, which way is also a good one and commodious for the production of good metallick Fruits, and that by the help of Salt, as the following Process shews, under this title, namely,

The Fire and Azoth *wash* Laton.

Some of the Philosophers have called their Patient *Laton*, and their Agent *Azoth*. But what subject that is which they meant by the name of *Laton* there are many Opinions of Authours concerning it, in whose Writings may be seen, that the greatest part of them do intend thereby *Saturn*, but yet not the vulgar: and even so is it too concerning their *Azoth*, or Vinegar, that being likewise diversly accepted. But be it as it will, yet this is certain, that even in the common *Saturn* do many abstruse secrets lie hidden, (to say nothing of the more mysterious *Saturn*, did we but know how to get it out.)

All Philosophers do suppose, that the Heart in *Saturn* is better than that in Gold it self, and for that reason do they call Lead a Leaprous Gold, and say, that if it could be mundified by a true washing, some great matter would proceed thereout of. Many Men have very much busied themselves about this washing, but yet have not attained unto ought else, save that they have brought the *Saturn* into a white,

fugacious, and liquid Body, concerning which labour I have made mention in this Treatise of metallick Cates and Sawces, and also in the third Part of the Prosperity of *Germany*.

In my judgment, the common *Saturn* is a commodious Earth, for the reception of a metallick Seed, and for bringing the same unto multiplication Witness *Paracelsus* himself who tells us, that *Saturn* may be compared to the Earth, for all such things as it seizeth on it makes like it self, and turns them into Earth, *viz.* in the common Fire, for *Paracelsus* here intends that.

But now, if some metallick Seed be sown in *Saturn*, as being a commodious metallick Earth, and that such an Earth and such a Seed be moistned with a due metallick Water, and be exposed to the fruit producing and vivifying Sun, the earth together with the Seed, doth by reason of the moistning caused by the pouring on, or affusion of the mineral Water, swell up, and become porous, and receives and conserves the Water, so that the ripening Sun cannot dry up the Earth, and consequently burn up the Seed. And by how much the oftner the Earth is moistned with the mineral Water, and the Sun expelleth the said humidity, so much the speedier doth the Seed ripen, and attain to his maturity.

For like as the Husband-man when he is about to sow this Corn, chooseth such a ground, as contains a fat and tenacious mould, which may not be washt away with the Rain, nor suffer the due nourishment to be withdrawn from the Seed; for if the Seed be sown in Sand, a little Rain can easily wash away the Sand and Seed, and impede the faculty of growth, which in a fat and tenacious Soil is not wont to happen. For the Water or Rain should but onely

moisten the Earth, that it may not be too closely comprest, but become porous and admit of the Rains penetrating unto the Seed: which when so, then is there hopes of the Seeds sprouting, in such a fat Earth which swells up by means of the Water, and of bringing forth its Fruit.

Even just after the same manner are the metallick Seeds to be sown, and ripened; and for Example sake, let us take the vulgar and common *Saturn*, (well mundified) for that Earth, into which we will sow such a Seed as having a great affinity with *Saturn*, loves to be augmented therein, whereby it may bring forth fruit. And like as the Seed of any Animal requires an Animal Matrix, as a Field or Earth to be multiplied in, and hath not any affinity with the common Earth: Even so likewise doth a metallick Seed require a metallick Earth, Matrix, or Ground, wherein it may germinate and be multiplied.

Now this multiplication is on such wise made, as is done in the Animals, by the conjunction of Male and Female, one performing the office of the Agent, and the other of the Patient. So then, we will make some trial in this Process which is here annexed, not for the intent of getting great Treasures thereby, but for the sake of searching into, and getting the knowledge of Nature; we will take the Male in the room of the Seed, and the Female instead of the Ground or Field, and we will try whether or no the Seed will admit of multiplication.

Let us therefore take the common *Saturn* for the Feminine Matrix, and Antimony of the Male-like-seed, which we will sow into its own Matrix, as Husbandmen are wont to do. I do not gain-say but that there are other Seeds, and probably better to be

found to be implanted in *Saturn*, than Antimony is: But yet here I content my self with this of Antimony, as having an intention of onely shewing at this present, by what way it may appear that a metallick Seed may be brought to a faculty or possibility of growth in the Saturnine Earth. And upon this account for Demonstrations sake of this Labour, was I willing to use Antimony, it being a masculine Seed of a Saturnine kind. For common *Saturn* is usually accounted for the true first Ens of *Lune*, and Antimony for the true first Ens of *Sol*, and they are in very deed found so to be. For you shall not find any Lead without Silver, nor any Antimony without Gold; so that I strongly perswade my self that from those two, there cannot arise ought else but what is good and profitable, did we but know how legitimately to compound and handle them. And although I do not profess my self to know many things, yet will I simply tell you my opinion, concerning the way which I suppose such a Commixtion and Maturation may be effected by.

A Philosopher saith thus,

By Gold and Silver you will nothing do,
Unless you use their first Ens thereunto.

The first Entities of both these are Lead and Antimony, the latter of which, (*viz.* Antimony,) is not to be admitted in that impure state that we find it in, unto the former, as unto its Bride or Spouse, but must first be washed in a hot and sharp Lixivial Bath, that it may thereby attain to a delicate silvery whiteness, and shine like a Star in the Firmament; which Antimony thus purged, is called by *Paracelsus*, the signed Star.

But yet I would not have any one to think, that I do here mean the common stellate *Regulus* of *Mars*, which would be dissolved in Spirit of Salt, and would separate it self from the Lead, which ought not to be: But that signed Star must be so prepared, as not to admit of being dissolved in Spirit of Salt, for else it will not serve for this Work. It must be so concreted as if it were so many thin Shells (one within another,) and so very hard as to be able to cut Glass, and to strike Fire out of a Flint. This signed Star being so washt, is to be sown into its own Matrix, and by the solar Heat and fruitfull Rain, to be promoted and enforced unto growth.

Take of the thus prepared masculine Seed, or signed Star, [A] parts, and of the feminine kind, [B] parts, melt the signed Star in a pure Crucible, unto which being molten cast the Woman in, which being cast in, there is presently made a sweet Conjunction and Commixtion of them both in that infernal Heat, in which they familiarly couple together.

The Mass being commixt, is to be poured out of the Crucible through wet Brooms into cold water,

and is to be reduced into Grains, and so the masculine Seed or Husband will be legitimately and duely mixt with its Earth or Ground, or Wife: which Earth together with the Seed which it contains is to be put into a firm Vessel, which fears not the violent corrosion of the Spirit of Salt, but in such a quantity as that scarcely a tenth part of the Vessel may be filled therewithall: Then must there be put thereon as much mineral Water, namely pure Spirit of Salt, as the Cucurbit can bear, and Fire is to be put thereunder, whereby the Spirit of Salt is to be again drawn off, by which Operation, the Earth together with the included Seed will day by day be refreshed, be moistned and swell up, by reason of the Spirit of Salt, no otherwise than as if you should moisten some dry and as it were parched Earth, with Water. For the *Saturn* is not dissolved by the Spirit of Salt, but onely swells up, and becomes foliated, and yet remains whole or entire, nor is it much unlike unto lovely lookt Talk, which shines with a delicate whiteness: and therefore the Philosophers say, sow your Gold in white foliated Earth. Without doubt they meant not common Gold, for then they would not have said, our Gold, but would have simply said onely Gold, had they not intended a peculiar Gold, or first Ens of Gold.

N. B. I cannot by any means omit to give you thus much notice, namely, He that cannot hit upon the manner of preparing the said signed Star, may endeavour the making of common *Saturn* aureous, particularly after this manner, as follows. Extract with Spirit of Salt out of the Oars or Veins and metallick fugacious Earths, the spiritual Gold that lies hidden therein, and extract or draw off this Spirit thus impregnated with Gold from *Saturn*, which Spirit may by this means be all agen had, and be

used about new extractions. And as for the Gold which the Spirit extracted, that the *Saturn* hath imbibed, and indues it self thereby with a golden nature; which if you imbue or moisten with many such extractions, that goldenness will, as I may so term it, grow up or increase in each cohobation, and the Spirit of Salt it self will become augmented.

If now the *Saturn* be imbued with a sufficient Portion of spiritual Gold, it must be reduced by X, or Alkalies, that so the spiritual Gold may be made corporeal, which will exhibit it self pure unto you, after that the *Saturn* shall be driven away on the Test. But yet there is no need of doing this, seeing it will be better to granulate the *Saturn*, and by those repeated cohobations to draw off the Spirit of Salt agen, being each time impregnated with that spiritual Gold, and so by this means will you enrich your *Saturn* with the greater plenty of Gold. And being so enriched it must be reduced by a fixing X, in my secret Crucible, which neither suffers any thing to go away in fume, nor to run out; in which reduction the spiritual Gold and the fugacious *Saturn* it self are fixed, so that both Gold and Silver are found on the Test with great profit, this labour requiring no other costs save those of the Fire.

This Operation which separates fugacious and fix Gold out of the Oars and Stones, is far better than that which is made by the Solutions of *Lune* and *Saturn*, described at large in the third part of the Prosperity of *Germany*. For here, we do not need either *Aq. Fortis* or Vinegar for the Solution of *Saturn* or *Lune*, neither need we the same to get the extracted Gold out of the Spirit of Salt, but being free from that labour and costs, we [onely] draw off from *Saturn*, that Spirit which hath extracted the Gold,

which [*Saturn*] attracts and holds the volatile and fix Gold that was in the extraction, insomuch that there is not requisite to this labour of drawing off the extractions from *Saturn*, any thing else save onely Coals and Fire. Add hereunto also, the gainfull encrease which daily comes in by the addition of Salt and Water, by which the Spirit of Salt is day by day augmented without any costs.

N. B. When the Spirit of Salt becomes too strong by reason of the Salt put thereto, that Water wherewith the Oar is washt, after the first extraction of the Spirit of Salt, [or after it hath first been extracted with Spirit of Salt] may be made use of [and put thereto] instead of common Water. For it is somewhat sourish, and hath likewise a golden nature.

N. B. Praise God, and forget not the Poor, seeing thou art sufficiently informed and taught by what means thou maist get great Treasures.

The things I here write, are not for this end, namely, to teach others how to make great heaps of Gold, but onely to shew them a way of attaining to a good Medicament, and withall, of knowing and perceiving by the same labour, that the melioration of the Metals is altogether possible and certain.

Whoever he be that could attain so far as to bring Antimony and Lead, as being the first Ens of Gold and Silver, into a certain Dissolvent, so as that the one would not precipitate the other; then at length would he have entrance upon the right way, which leadeth unto great things, like as also Gold and Silver being dissolved in one and the same *Menstruum* gives beginning to things of great moment. I dare affirm therefore, that he that can reduce Gold and Silver, or Antimony and Lead, with Salt, into an agreement,

hath opened a most strong Gate which leads unto a great Treasure; for then the Patient must suffer even unto death, and must die, out of whose dead Body, new and living Bodies do afterwards come forth.

Although I have often told you in my Writings that Gold has no greater enemy than combustible Sulphur, and that nothing is more inimicitious to Silver than Salt, and nothing more displeasing to *Mercury* than a strong *Lixivium*, and that amongst these contraries there is a perpetual Antipathy so long, untill they are constrained by Art and Skill to become friends and mutually to embrace each other: yet notwithstanding; this will not be so easily fesible by every prating Boaster, and that makes a great noise by his lofty vapouring speeches; no, but for the sake of these very Men, are such great *Arcana's* justly and deservedly wrapt up in darkness, and indeed 'tis fit they should so be.

Moreover if there be required a great suffering, 'tis necessary that both the Gold and Silver, as being Male and Female, should suffer together and not barely the one or the other apart: for hereby this Regeneration will be made so much the nobler and the more magnificent. For Example, make a Circle, and cut or divide it with Diameters crosswise [or at right Angles through the Center] so that the extreams of the Diameters which divide themselves in the middle or central point of the cross may touch the Circle, and that of those four extreams [or Semi-diameters] one may touch above, and the other beneath, and the other twain may reach, one to the right side, and t'other to the left. Place the Gold in the uppermost extream marked with the letter A, and his enemy, namely Sulphur, in the lower extream, which the letter C, demonstrates. In like manner

place Silver on the left side of the Gold, at the letter B, and its enemy, *viz.* Salt on the right side marked D, and you will see how aversly these enemies behold each the other. The *Sol* looking about him espies his capital enemy, Sulphur, directly opposite unto him, and hath *Lune* at his left side, and Salt at his right; and very willingly would he enter into friendship with *Lune*, and Salt which are joyned at his side, if they but would, or indeed could. But he honours not his capital enemy Sulphur, with so much as a look. The *Lune* placed by the side of the Sun, does not permit the Salt to joyn it self with the Gold. For when the Salt is with the *Sol*, it clearly hinders the *Lune* from associating it self with the same. Nor can it possibly be that Salt, *Lune* and Gold should enter into a thorough familiarity. Thus too is it with *Lune*, who hath her capital enemy diametrically opposite unto her, and very willingly would she enter into friendship with both her neighbours, *viz. Sol* and Sulphur, if they were not such great enemies (to each other,) and refused this familiarity. For if *Lune* associates unto her self the Sun, then Sulphur denies to come into the society. If she admits the Sulphur as her companion then, then *Sol* is excluded, as abominating the friendship with his enemy Sulphur. Much less therefore can *Lune* be the companion of them both together. *See the Fig. in the Book of Dialog.*

But now if the Gods please, that these four capital enemies, should unite in one sociable amity, and that wonderfull regenerations should arise from this new familiarity, (then) do they command *Vulcan* to heat in the Fire this Circle comprizing those four capital enemies, thus constituted in the four aforesaid extreams, and casting such hatefull looks upon each other, and yet not knowing how to escape out of the

Circle, and to press them together more and more with his Hammer by little and little, untill all four being driven into one mass, do come together into one body, which body doth then obtain a power of reconciling all enemies, and of effecting great matters.

By this here spoken may any one easily conjecture, what great suffering there is in this Conjunction, and what great streights do afflict these enemies, when each of them must thus against their will enter into friendship with his capital enemy. Verily we find them to be such sufferings as have not their like again, and therefore do they produce to light, such great and such wonderfull regenerations. Now whatsoever it be that is exercised in but a small suffering, the same doth admit of but small emendation.

The greater the suffering, the greater the melioration, so that that affliction which brings with it even death it self, brings with it also so much the more noble and magnificent Regeneration and Resurrection. He that suffers not in this World, shall not have the Crown put upon him after his Resurrection. By how much the greater and more innocent the suffering and affliction of this life is, so much the greater, and fairer a Crown may be expected in the other World.

The Grape is prest so long, till it be rid of all its juice, this juice doth indeed bring a sweet and pleasant delightsomness unto mortal man, but the Grape it self which the juice is prest out of, ceaseth to be a Grape, and perisheth through defect of juice, and passeth into nothing. But unto the noble Vine, hath God given this benefit, that it yearly bears not barely one but many Grapes together: All which

being pluckt off, it doth nevertheless produce the following year no fewer, but rather more Grapes; and still remains a blessed and fruitfull Vine, because it is furnisht with roots and fertile Boughs. On the contrary, they that have devoured the good and sweet juice themselves, remain always hungry and thirsty, and that for this reason, because they guzle down the juice too new and fresh, whereby their Bellies swell, and they receive no nutriment therefrom.

This is a thing certain and undoubted, that the bodies of the Metals become by suffering and dying far more excellent and more noble. He therefore that knows that the patient is to be subjected unto its own agent, and doth also understand by what way they are to be conjoined, will never labour in vain, but will reap the wished reward of his pains.

When the agent doth touch onely the superficies of the patient, and penetrates not into its heart or root, there will verily be but a very little good done, save onely this, *viz.* That the Agent being afore rendred aureous, is able to give unto its patient also a golden nature, and to bring the same to an aureous degree, and to bestow upon it the perfection of Gold: but that melioration which is done onely by it self proceeds on very slowly.

As concerning the manner of enduing the Spirit of Salt with an aureous nature, that so it may the sooner render its patient a partaker of golden virtues, we have spoken of that already, and demonstrated it clearly enough; he that does not understand, we cannot help him any other way.

N. B. When the Eagle, the Servant of *Jupiter*, hath with his beak and talons pluckt out the coagulated beams of the Sun out of the Cliffs and Rocks, and

brings them unto *Jupiter*, he is so very bountifull, that he sends down the same unto us by the Rain, which is of so much efficacy, as that all the Herbs upon which it falls are bettered, and the martial, venereal, saturnine, *Lunar* and mercurial Herbs do put on the golden nature of the Sun; so efficacious is the golden Rain of *Jupiter*, if the Eagle hath first brought unto him the coagulated rays of the Sun.

And that I may be the better understood, and that it may be known, that the Melioration of Metals may be accomplished by a dry Agent, full as well, yea and better, and more profitably than by a moist Agent; I have judged it a thing worth while to adjoyn the following Process under the Title of *the Great Country Farmer*.

And let the studious Artist know, that the amending of the Metals by the dry way, by the operation of dry Salt, is far more easie, and may likewise be dispatcht in a greater quantity, than is wont to be done by the moist way: and that there is nothing required to this operation save Salt and Coals, be the Metals that are to be fixed, even what they will.

For Example, if a man be desirous to fix *Saturn*, or to procure unto it a Silvery nature, there needs not pure Lead be taken for this work, seeing he may have the Oar or Vein thereof for much less price; and indeed there is some that is a wild and sulphureous Oar, which yields not, in the melting, any good Lead, and may be had in great plenty in some places of *Germany* that I know of, for a very small price, or rather for none at all. Such a wild Oar of Lead as this is, which yields neither good Lead, nor is fit for the Potters to glaze their Pots withall, by reason of its hard fusion, doe I chuse for my operation, not onely

because it costs less than other such Oars of Lead doe, but for this reason too, because it hath store of Sulphur, and fit enough for fixation.

This Vein or Oar doe I bring into small Powder, and mix as much Salt thereto as need requires, then cast it in upon the Coals, in such a Furnace as I have described to make store of Spirit of Salt in: The Salt and the Sulphur exercising their vehement or powerfull virtues upon the Lead, causeth it to be afflicted with terrible dolours, insomuch that part thereof ascendeth on high [or sublimeth] with part of the Salt, and betakes it self into Receivers fitted on for that purpose. In which sublimation, the Salt and the Lead ascend in a spiritual manner, and contrary to their will, suffer spiritually, and so are constrained to enter into friendship, finding a place of quietude in those cold Receivers, and there setling together. The residue of the Oar, and part of the Salt being burnt up, and emitting no more flores, but falling down through the Grate like Ashes, more new or fresh Coals must be put into the Furnace, and new matter must be thrown thereupon, as afore; and this Labour is to be continued so long, as it shall please any one to follow it. Now by this, the *Saturn* is far more vehemently afflicted, than in the moist way by the Spirit of Salt; And if unto the Oven [or Receiver] receiving the fume, and in which the flowers of the Salt and Lead settle, there shall be applied yet several Receivers, there will then be therein caught store of Spirit of Salt, which being rectified, may be agen made use of in the moist way. The flowers being taken out of the Oven or Receiver into which the fume goes, are to be agen thrown in upon the live Coals in the Furnace, that they may suffer anew and be sublimed. After that they are all sublimed again on this wise, they are to be agen taken out of

the Oven, and be cast in upon the live Coals; and must be afflicted with these Labours so often repeated, untill they become fix and ascend no more, but fall down into the Ashes. Which being washt, will yield a Salt profitable for many things, and will quit all the costs which have been laid out upon Lead, Salt, and Coals; so that the Spirit of Salt which is gotten, and that which is amended in the Lead Oar by the Salt, cost nothing. The Ashes being washt are to be reduced, in a Furnace, by blast, and be so often tormented, till a good portion of Silver be gotten by this operation, which the elaborated matter, being purged by a due separation upon the Tests, will give. And so shall you have Gold and Silver by the benefit of this operation, by which [operation] we have manifested unto you the *Great Country Farmer paying his yearly Rent.*

Now like as *Saturn* is dealt withall in this operation, even so are the other Metals wont to be handled too; but yet you must observe the Regiment of the fire, which, according to the diversity of the Metals, must also be diversly administred. And even the Commixtion it self requires good heeding, as being a business of no small moment.

Moreover, in this operation you must also note, That one Salt is more fit for this operation than another is; for by how the sharper nature they have, so much the more commodious and profitable doe they shew themselves to be. So Common Salt sublimed, as is done in this Labour, will operate far stronger than Common Salt it self unsublimed. Besides, there are Salts to be found which work yet far more powerfully, yea so strongly, as that they need not the help of an external fire, but doe produce their effects even in the cold. The operation

of which, in the moist way, if any be desirous to promote and strengthen by an external fire, he may so doe, in a Lamp-Furnace, and free himself of the charge of Coals, and be exempt from that frequent Labour by which the Fire is to be maintained.

Some moist Fires are of such great virtues, as that they need not any Lamp-fire, but a small golden thread or wire in burning Spirit of Wine is capable of administring heat sufficient.

And the burning Spirit, if made of Leaves, Grass, rotten Fruit, or Corn, and Grape-stones or husks will be but of small costs, or in a manner none at all. Now a pound of such Spirit being placed with a Golden wiek in a convenient Lamp will suffice for three or four days, and give heat enough. But yet nevertheless, that moist fire doth ripen its Metal without the help of any external fire at all, and yields its profit, but then it requires a longer space of time.

Put case therefore, that I make my moist fire so strong as to be able to perform its office in the cold, and that it needs not any external fire: And if I were to make a fire, it would needs require one Ducket's charge: If now, standing any-where, it yields me two Golden Duckets out of the maturated Metal, it wou'd doe well enough, and abundantly recompence the labour and costs expended. For there's nothing wanting of the Metal [you took to ripen] save that which is changed into Gold and Silver.

And forasmuch as I can set by many such Vessels, and those great ones too, there's no doubt to be made, but that my gain will be the greater, and that with very little labour. For now, at first, the labour of preparing the moist fire, is in a manner no labour at all, for in three or four days may be so much made as is sufficient for the maturating of a great deal of

Metal. For this fire may be compared to a Seed, which being sown in the Earth afore Winter, doth in the Summer-season produce store of Fruit, and fit to be reaped.

And though this maturation proceeds on exceeding slowly, and excludes all hast, yet it brings with it this benefit, namely, that it requireth no other labour in the Winter-time, but to be onely once laid by, and the perfecting thereof must be committed to God and Time.

There are various and divers such cold Fires, that promote the maturation of the Metals, and may be gotten out of divers Subjects, namely, out of Tartar, Urine, Hairs of Animals, Horns, Calx-vive, Soot, the Blood of Animals, the Feathers of Birds, the Bones of Horses, Oxen, and other Beasts, cut of which such a fire is very difficultly prepared, one of them, here reckoned up, excepted, out of which the said fire may by an easie labour and business be made, and without costs. It is therefore a great gift of God, and an especial grace from our Creator, if he maketh us possessors of such a Country Farmer, which being sustained without any costs, doth notwithstanding very largely pay his yearly Rent. To God therefore are uncessant thanks to be returned for so great a benefit.

But we have said enough of these moist and dry Metal-ripening Fires; what way soever any one is minded to chuse, that way may he follow, for it lyes in his own free choice. If he chance to err, let him not lay the blame upon me, who out of a good mind have undertaken these labours of writing, but cannot thrust the chewed meat into any ones mouth. I will by God’s permission show the wonders of God to some friends this next Summer, that so such as come

after us may likewise have occasion of praising God, and of giving him thanks.

But even as the common Earth, when it is moistned with often showers, and now and then freed of them by the heat of the Sun, retains in it self a fruitfull Salt, and doth necessarily acquire a fertility: So likewise our Earth doth not onely daily encrease in goodness, but in weight too, and becomes more ponderous: but you must not think that this heaviness or weight proceeds from the Spirit of Salt's insinuating it self into the porous Earth, no: For if the said Mass should be but onely eight days time in the digestion, and the Spirit of Salt be [then] washt off, yet would it be encreased a quarter part; which ponderosity comes indeed from the Spirit of Salt, out of which the *Saturn* draws something unto it self for nutritious sake, as the Common Earth does out of the showres of Rain, and becomes more weighty.

For if there were no occult and nitrous virtue in the Rain, it would conduce but little to fertility; and if there were no spiritual and astral Gold, or spiritual and astral Sun in Salt, the immature Metals could not be ripened by the same. By how much the oftner therefore, a good Spirit of Salt is drawn off from the *Saturnine* Earth, and *Saturnine* Seed, so much the sooner also doth that Seed arrive unto its full ripeness. For at every turn [of drawing off] something of the good part of the Spirit of Salt remains behind, attracted by the Earth and Seed, from which the melioration and augmentation doe arise: as may be seen in the Vegetable Seeds which sprout forth out of the Earth, and are encreased by the help of Rain.

The possibility of these things I have seen, but

have not hitherto brought the said matters to a full maturity, or to speak more rightly, I have not finished the whole operation. He that is minded to make a thorough trial, may so doe: and if he misseth the effect of his endeavours, let him not blame me, for I doe not aim at drilling on any one by my perswasions, to bestow his charges on an uncertain thing. But I mention these things that so the nature of Metals as also of Salts may be known, and that (by the help of this knowledge) the Writings of the Philosophers may be the better understood. For the labour here proposed avoucheth the truth of those Operations which the Philosophers call their Calcination, Dealbation, Incineration, Ascention, Descention, Cohobation, Inceration, Distillation, Sublimation, Volatilization, Maturation, Fixation, and say that all these and the like Chymical Operations may be made in one Vessel, with one Fire, in one Furnace, without any change of the Labours, Vessels, or Fire.

For the Philosophers have described their greatest secrets and *Arcana's* parabolically, and in Riddles, but especially the Poets, as *Ovid*, *Virgil*, and many others, who are very hard to be understood by those that have not the knowledge of the nature of Metals, which being once known and understood, renders the meaning of the Poets easie. For the Poets were wont to impose one while such a name upon such a Metal, another time another name upon another Metal, which custom of theirs, he that does not heedfully mark will easily fall into an errour, and miss the apprehension of their meaning.

For Example, in one place they call Copper *Venus*, in another, the Wife of *Mars*, in another, the Sister and Wife of *Jupiter*. And so deal they with Silver too,

one while they call it *Lune*, by and by *Diana* or *Jana*, another time *Vesta*. *Apollo* is by them stiled one while *Sol*, then *Phœbus*, then *Latons*, so that it is exceeding necessary, for those that are desirous to learn ought out of their Writings, to be well acquainted with those different names and Appellations. And although the Poets do account all the Metals for the Sons of *Saturn*, yet do they sub-distinguish them and stile them, *Saturn*, *Jupiter*, *Venus*, &c.

The common Lead is *Saturn*, and so is Antimony, *Saturn*, *Bismute*, *Tutia*, *Lapis Calaminaris*, the Ashy Colour, Yellow, White, and red *Magnesia* are termed by the name of *Saturn*: The white *Marcasite* and *Zink* are deemed to be of the Family or Pedegree of *Jupiter*: *Orichalcum* or white and red Copper, are stiled by the name of *Venus*. But according as *Venus* is impregnated, and according as the Copper is white or red, so hath it its name. The red Copper is as yet a Virgin. Forasmuch therefore as the Poets have committed unto Writing the Transmutation of the Metals under the Cover, and vail of Fables, and have made mention of *Saturn*, *Jupiter*, *Mars* and *Venus*; it can never possibly be, that he who knows not this different distinction can understand their meaning. And for an Example hereof, consider but the Fable of *Diana* and *Apollo*, brought forth at one Birth by *Latona*, who was gotten with Child by lying with *Jupiter*, and was driven into exile by jealous *Juno*, and having a long time suffered Persecution by the biting Serpent *Python*, and being driven to flye through all the Countries of the World, did at last after many grievous labours and troubles pass over the tempestuous Sea into the Island *Ortygia*, and betook her self to her Sister *Asteria*, by whom she was received, and begat these Twins, *viz. Diana* and *Apollo*.

Who will be able to apprehend the meaning of this Fable, save he that well understands the nature of the Metals? Verily no body will so much as dream of or smell out ought of those Mysteries, unless he shall meet with such like Histories in his metalline labours, and then at length will he understand what the meaning of the Philosophers is. But for Example sake, let us take two Metals which have an affinity with each other, namely *Jupiter* and *Venus*, these I joyn together, that so the Woman may be impregnated with the masculine Seed. *Latona* therefore being great with Child, I cast her forth into exile, that she may be continually persecuted by the biting Serpent *Python*, untill she flies through the Salt and stormy Sea, into the Island *Ortygia*, to her Sister *Asteria*, dwelling in the Island *Ortygia*, and there bring forth the fair *Diana* and *Apollo*. Now these things are easily understood, were but the genuine Appellations substituted in the room of such strange terms, of which thing I have onely some knowledge, but do not profess my self a perfect Interpreter. Yet methinks I cannot choose but say somewhat. The venemous Serpent *Python* is a sirname of *Appollo*, for he is produced by the efficacy of the Sun, and is that corrosive Salt which doth so long afflict and torment the impregnated *Latona* all over the dry part of the World, untill she betakes her self by the Sea, that is, by that strong Salt Water, unto her Sister, that is, unto pure *Venus*, and precipitates her self, and brings forth the fruits of *Jupiter*, namely, *Diana* and *Apollo* together. The Poet doth here mind both the moist and the dry way together, when the Metal is wrought with a due Cement, and made fix it is [then] dissolved with the Salt Water of the Sea, and pure Plates of *Venus* are put into it thus dissolved, that so the pure Metal may draw unto it self her

impregnated Sister, who brings together with her Gold and Silver, which having been so long hidden in its body doth now manifest it self.

It is indeed the better to fix the Metals by Cements, and so to render their fugacious Gold and Silver compact, which may be as well done in the moist way by sharp Waters and moist Fires. But if the Metals, legitimately impregnated, do first pass through a dry and burning hot Fire, and are afterwards yet once more transmitted through the moist and cold Fires, then *Pluto* sends the mundified Soul out of *Purgatory* unto *Neptune*, by whom it is carried into Paradise, where it doth afterwards remain safe and free from all danger of the Serpent.

Upon occasion of the aforesaid Fable, and particular Transmutation of the inferiour Metals, this is to be yet more observed, that every *Jupiter* is not fit to impregnate *Latona*, but that onely which is yet living, efficacious, young, and full of Seed is able to impregnate *Latona*. For *Latona* carried with her no more but the Seed onely of *Jupiter* into the Island *Ortygia*, and left behind her all the body of *Jupiter*.

Moreover this is to be considered, that *Latona* did bring forth *Diana* first, in the Bosom or Lap of *Venus*, that is, of the Midwife, but *Diana*, presently after she was Born, performed the office of a Midwife in receiving her Brother *Apollo* in her Lap, which thing is sufficiently manifest unto those who have laboured (though but little) in the Metals. For should the Nativity of *Apollo* have preceeded, *Venus* could not have received him, for which reason *Diana* ought to come forth first, that so she might the more commodiously receive *Apollo* from *Latona*. I know not how by any means it may be proposed more clearly.

Every one that does but know the nature of the Metals doth well understand, that when Gold and Silver are spiritually dissolved in one Water, and that plates [of *Mars* probably] are put in to the Solution of the Gold and Silver, neither of those Metals will adhere to the Plates. But if the Plates of Copper are put into that Bath, he shall presently see that all the Silver that was in the Water will adjoyn it self thereunto. And now, after that the Silver is thus precipitated and sticks on to the Copper, the Gold will likewise fall down out of the Solution, and apply it self to the Silver; which labour I have more at large handled in the third part of the Prosperity of *Germany*. It could not therefore otherwise be, but that *Latona* must first bring forth *Diana*, and *Apollo* afterwards, seeing that *Venus* the Sister of *Latona* could be helpfull onely in the bringing forth of *Diana*. It was therefore necessary that *Diana* her self should be an assistant in the Birth of her Brother *Apollo*, for otherwise he could not have been Born.

My time admits not of producing any more such similitudes in this place. We will defer them till some other time, namely, for the Edition of the Work of *Saturn*, wherein shall be taught how the most vile, and most abject Metals are to be maturated by the benefit of Salts, whereby they may in a particular way yield forth Gold and Silver.

But forasmuch as I cannot divine, what impediments may put a stop to the edition of the work of *Saturn*, and that in this very Treatise here is often mention made of *Saturn*. It cannot I think be any ways hurtfull, if some good thing be yet farther adjoyned. And such things as are here manifested of *Saturn*, it will not be needfull agen to mention them in other places, seeing there doth yet still remain

matter enough for to fill a whole Book of the Secrets of *Saturn*. And there lie such wonderfull Secrets under the vile and dirty Garment of *Saturn*, as being manifested, would exceed all the belief of unskilfull Men. For he is not onely an expert Fisher in Fishing Pearls out of the Salt Sea, but is withall an expert Hunter, in driving the Wild Beast out of his green Grove or Cops, and of catching him in his Nets, as we have told you in the foregoing third part of the Prosperity of *Germany*.

Nay, he is a bathing Gentleman of singular skill, who by his bathing and washing his Children, adorneth them with the comeliness of *Diana* and *Apollo*. When he is alone, he serves onely for *Apollo* and *Diana* to wash off their accidental impurities and defilements, that so they may recover their natural fairness. The other Metals can't brook his so over sharp and rigid bathing, but are rather suffocated and killed therein, than become more fair and more pure. But if *Saturn* shall have first washt himself even unto the highest whiteness, in a Bath of common Salt, he is not then so austere and severe, but prepares for his Children a far more tolerable Bath, which being agreeable [or proportionable] to their Weakness and Sickness, renders them all fairer and more pure. His greatest virtue consists in his Water which doth both particularly and universally free the Metals of all their defilements. I have often had a particular experience [hereof,] and yet daily can (God be praised) shew and teach the same unto others. But I cannot do any such thing in an universal way, and inform others as to that; nor do I vainly brag of so great a matter, though I have my thoughts as touching the manner how this thing may be effected. Nay the more I conceived about that matter, the lesser would I boast of the same.

Verily it is a great shame to boast of that thing, of which thou hast not even the smallest knowledge, or at least dost not know any thing else, but what thou hast drawn in, by the reading of other Writers. 'Tis a common proverb, *That those Cows which Bellow, or Low overmuch, are said to yield the least Milk*, and that this is a thing true, yea most true, experience it self doth testifie.

The Chymical Art is become at present so common, that almost every body, after he hath but viewed over one or two Chymical Books, (though he never moved his hands to the Work, nor understands so much as the Chymical Terms themselves) is nevertheless wont impudently and lyingly to boast of the knowledge of the universal Medicine. Nay thou shalt see some to proceed on to that heighth of boldness, as even to write Books of so great a Secret, and to dare promise the Revelation of the same unto others, and yet for all this know nothing at all, and have not so much as any the meanest foundation, but rely solely upon that knowledge, which (being as we said afore, drawn out of other Writers) causeth in them a most uncertain hope, of a thing most extreamly obscure.

He that is not a stranger unto, nor ignorant of metallick affairs, can easily discern the Lyers from the true Writers, and can judge who are true, and who false. Such as do know somewhat are not wont to make a bragging noise of their skill. On the contrary, those Brethren of Ignorance do offer unto every one that most secret miracle of Art and Nature, namely, the universal Medicine, which thing a true Philosopher neither ever did, nor ever will do. But as for the revealing of the particular washings, purgations, and meliorations of the Metals, whereby

Gold and Silver are to be extracted, if any one doth know these things and discloseth them, and desires not to bury his Talent in the Earth, he does well.

Neither would any one be endammaged by such a discovery though those particular *Arcana's* should be known even unto all Men, and that every body could effect such Operations; for nothing could redound from them but great gain throughout all the World.

But these things here mentioned may sufficiently serve for an evident and manifest admonition for every one to beware of the Books of such Writers, (but why do I say Writers? they are rather Collectors and Describers, who after the manner of Botchers do patch up new Books our of old cast Garments) and to give no credit at all unto them as containing nothing of truth in them, and to think that those kind of Men betake themselves to this Book-patching Trade, meerly to get their Bread by.

Some such Men have I known, that provide not either for their Food or Rayment any other way, than by the sale of such false Philosophical Books, which they have from the Printers to sell to others, receiving a certain price for their labour, which they bestow in profering them to Sale. O miserable Philosopher! Who doth not know so much as to get his Food at Home in his own House, but is constrained to shift after it by the bare selling of such kind of Books. Let this here spoken be as a warning. If need required, and occasion were, I would not fear to divulge their names too; who having not any the least knowledge of nature, do nevertheless dare to offer the Revelation and Confection of the great universal unto others, and cast such a great blemish of reproach upon the most noble Chymical Art, as makes it much contemned, whereas a more noble

and more excellent Art cannot be found. I'le not censure any, but yet it would become the magistrate to examine those great Philosophers, whether or no they were actually and in very deed skill'd in that great universal, (which they boast so wonderfully of, and write Books of such great moment, and promise to teach others too, as if they excelled even *Hermes* himself in the knowledge of the Art) and if in the proof or tryal they gave good satisfaction, and confirmed the truth of their Writings by a real and true melioration of the Metals, then to honour, defend, and protect them, as rare and singular Philosophers. But if they know nothing nor could perform ought of their pretended Art, the magistrates would not do unjustly if they punished such men, and made them exemplary, seeing too that they endeavour to asperse and backbite other honest men, who are endued with the skill and knowledge of such great things, with lying reproaches. A good Gardener being wont to gather good Honey out of the Bee hive which he has in his Garden, if he finds a Nest of Wasps or Hornets any where near, built in some hollow Tree, and that they steal away the Honey from his Bees, he right worthily destroys such a Nest, and roots out of his Garden those Thieves and Robbers of his Honey, that so for the future they may not detriment them any more.

Were but one or two of those Fellows handled in such a manner the rest would be deterred and would not so easily promise others by their deceitfull Writings, the making of the Philosophers Stone, which they are so extreamly ignorant of. Certain it is therefore, that no true Philosopher, were he a partaker of the great universal, will indifferently offer the same unto all Men, and calumniate (without any cause given) those that are so innocent (and who

have forgotten more than others have learned) and publickly bespatter them with most false Lyes before the whole World, to the great detriment of the Persons so abused.

But to return to my purpose, and to shew in this place yet another very considerable *Arcanum* of *Saturn*, you must know, that I have already published divers great secrets in this fourth and third preceeding part, but cursorily onely, because I have not as yet attained to the one half part of their most great utility, and I was willing onely to shew what things mought be done.

But forasmuch as I have fortified their use with good and sharp Weapons, and that one or other sometime lighting thereupon by chance, and reaping great profit therefrom, may possibly judge that he is no ways at all bound or beholding unto me for the same; I was willing for the better information, and instruction sake, to adjoyn these few things, which are very weighty and considerable.

In divers places of the foregoing third part, and of this fourth part too, I have the preparation of the *Mercury* of *Saturn* and *Lune*, that is, I have shewn how *Saturn* and *Lune* may be reduced out of their Solutions, by the help of Salt, into a Snow like, fusile, fugacious, pure and dry Water; which Waters are by me called the *Mercuries* of *Saturn* and *Lune*, by reason of their fusile and volatile nature: They are metallick Waters not wetting the hands, and yet by reason of their form do they bear the name of Water, because being put into a Crucible, and molten with a small Fire, they are pellucid and transparent like unto Fountain Water, insomuch that they may be seen through even to the very bottom: But yet the Water of *Saturn* is of a more transparent clarity than the

Water of *Lune* is.

But forasmuch as our main scope in this place is to make some mention of the use of the Saturnine Water, we will let pass other matters, and declare some of the virtues of the said wonderfull Water in the melioration of the Metals.

Let the lover of Art therefore know, that the Saturnine Water doth display its virtues in washing the Metals that are to be amended. For if any imperfect Metal, as Iron, or Tin, or Copper, be adjoyned thereunto, and held in such a Vessel, as in which, that Water cannot by means of its fugaciousness vanish away, nor through its subtile and penetrating power run out, and that it be digested for a while in such a Vessel, this Saturnine Bath seizeth upon, washeth, and purgeth the Metal, and transmuteth it into a better and more pure Metal, but yet with no great profit, for it onely shews the possibility.

But yet if some tinging Species be adjoyned thereunto, it does not onely make a pure washing, but likewise exalteth and tingeth the same, according as the tendency of the adjoyned subject is, either unto a white or a red Tincture. But what those Species are, there's no need of disclosing them to every one. 'Tis sufficient that I have laid open the Water, and the use thereof in the washing of the Metals.

But that the Saturnine Bath may the sooner and readier seize upon the Metals, and wash them, it is the best way, to add one third part of the Mercurial Water of *Lune*, to the Mercurial Water of *Saturn*: which Waters do very readily conjoyn, and each help the other in the washing, and do also tinge, according as the property of that Tincture is, which

is adjoyned thereunto. I will for Example sake adjoyn the manner, which shall both shew the possibility of the thing, and administer occasion of farther search.

Dissolve one ounce of pure Silver in *Aq. Fortis*, and three ounces of common Lead, in more *Aq. Fortis*, mix both the Solutions together, and precipitate them, either with common Salt Water, or with Spirit of Salt, which is all a case. Pour off the *Aq. Fortis* from the *Coagulum*, after its being settled to the bottom, which said *Coagulum*, you need not wash with Rain Water, for this Work, but press the liquor onely through a thick Cloath and so free it of its humidity; this done, dry this metallick Cheese by the Fire, and you shall have a Bath very fit to wash *Venus*, *Mars*, and *Jupiter*. And now when you are minded to try whether or no the success will fadge well, divide your Bath into three parts, and wash those three Metals on the following manner.

N. B. Let no Body take it in evil part, that I here silently pass over my secret bathing Laver, serving to wash the Metals in, and not permitting the Water it self to go away in fume: He that is minded to try this Operation, may for the first time make use of Crucibles, which, although they may bring some loss by letting go part of the Saturnine Bath, yet notwithstanding they will demonstrate the success of the business, and the loss by them caused may afterwards be prevented by due *Mediums*. The manner of using the Bath aforesaid, is as followeth.

Take of the filings of pure Iron, Copper or Tin one part, mix it with three parts of our dry Bath, and put the matter thus mixt into an earthen Vessel, which hath the compactness of Glass, such as those are, which are made at *Siburg* near *Colen*, at *Bamberg* in *Franconia*, and at *Waldenburg*, near *Cassela* in *Hassia*,

and in other places of *Germany*. (*N. B.* The common Vessels and Crucibles cannot retain this Water, but it penetrates through them like Oil.) Heat your Vessel so hot as to cause the Water together with the Metals to melt and flow well, in which liquefaction, part indeed of the water will pass away in fume, but this loss may be easily prevented.

When therefore your Metal hath been thus boild for about one quarter of an hour, part of the same will be found washt and turned into good Silver: nor must you thus understand me as if the Silver in the said Water were onely precipitated by the Metal, and that no part of the Metal it self underwent any Transmutation. For albeit that that Silver which was added to the Saturnine Water be precipitated by the adjoyned Metal, and returns into its former Body, yet nevertheless there is more Silver gotten than was added to the Water. For that Saturnine Bath while it is occupied about the dissolution of the Metal, doth by the efficacy and Operation of the adjoyned *Lune*, exalt and tinge part of the Metal to an higher degree.

But although this labour does not promise any golden Mountains, it is here put for this end onely, namely, that the possibility of the thing may be learned hereby: yet notwithstanding, if any one did but know how to adjoyn to this Saturnine Water, a golden Ferment, instead of a silvery one, it could not otherwise be but that he would get no contemptible gain and profit: yet if the same Operation be so instituted with a white Ferment, as that not any the least part thereof may go away in fume, and be lost of the Bath, it will bring no loss. *N. B.* Neither is it always needfull that the Ferments of pure Metals be adjoyned to this Saturnine Bath, for I think that apt Minerals may be found, which may be adhibited in

the room of aureous and argenteous Ferments. Nay more, I do likewise think that such subjects may be adjoyned to this Saturnine Mercurial Water, as may be therein fixed into white and red Tinctures; the thing it self I have not as yet tried, nor do I profess my self so great a Master, for I propose to my self this onely end in my Writing, namely, to shew unto such as are desirous after transmutations, the way of arriving unto the truth it self. For it will be far easier for every one that searcheth into the business more thoroughly, and that maketh more accurate tryals, to find out far greater things, yea much more than he could ever believe. More such Woman-like Washings, and more Boys Plays shall (God willing) be manifested in my Work of *Saturn*.

But now this Saturnine dry Bath may be prepared much easier, on this wise following; choose you out such an Oar or *Minera* of Lead, which is very pure and clean, and hath nor either Iron, or Copper, or any other Metal admixt therewithall: (*N. B.* If Silver be likewise in the Oar, it rather profits than hinders, but the said Oar must not have much earth mixt in it, and that which is on to it must be taken from it by washing off the same with fair Water.) One, two, three, or more pounds of this leaden Oar thus washt, must be put into a strong Cucurbit, and so many pounds of Spirit of Salt must be (put on and) drawn off thencefrom, which Spirit of Salt, as being a moist and Philosophical Fire, will reduce the pure Oar of Lead, which it toucheth every where and in all places of the same, into a bright, Snowy, easily Meltable, and fugacious Calx, which is to be well washt with Water and be dried: This is that metallick Bath, and that dry Water of the Ancients, which wets not the hands, and which is able to perform admirable things in the Metals.

But that this Philosophical and moist Calcination of the Oar of Lead, may be accomplished without any costs, some Salt Water must be poured upon the Spirit of Salt, in the Cucurbit, that the Salt may ascend together with the Spirit, and may augment the same with so great a quantity of Spirit, as may quit the costs of the Oar and Fire, and yield you the dry Saturnine Bath for nothing, which said Bath may be employed various ways about the washings and emendations of the Metals. For out of the Oars which never underwent the burning by the Fire, and were never as yet deprived of their growing faculty, this Bath thus prepared is to be preferred far afore that, which is made of the molten Metal.

I do here open to the studious of Art, the Gate that leads unto most great secrets, which were never so clearly manifested by any Man. It must necessarily therefore be, that either God must put a stop, or that the Operator or Labourer himself must be of a stupid and simple capacity, if he cannot learn from these instructions, as much as to live in quietude, and so furnish himself with Food and Rayment.

If therefore God shall vouchsafe his Blessing unto thee in the use of this secret, then give unto him, the bestower of all good things, thy utmost thanks, and be not unmindfull of the Poor. Sustain thy life by the works of thy hands, and let thy light shine before the blind, neither bury the same enviously in the Earth. Do good to every one, that it may be discerned and appear what Tree thou art. Entertain not too great an opinion of thy self, but remember that thou art a Man and mai'st err and fail. Give no body occasion of quarrelling and brawling. If an unjust conflict be brought upon thee, commit thy self wholly unto God, and he will succour thee. Give place to the greater,

and spare the lesser, God will defend thee and suppress thine Enemies.

The Heathen Philosophers accounted the Prophet *Ezekiel* as a clownish Philosopher, because he wrote so very clearly of the Divine Mysteries. For they took it very untowardly, that he was not so envious, as to involve such great Mysteries in silence, but wrote so openly of the same.

He that will now-a-days make it his design to wind himself out of the crew of Sophisters, and such kind of Philosophers that putteth together hurtfull Books, consisting of fine Spun, and seducing words onely meerly for their own gain, and without any profitable information at all in them; he I say that would free himself from such, overcome them, and bear away the prize, must imitate that countrey man, who on a time entring into a Fencing School at *Norimberg* did behold the Fencers artificially combate together so strongly and so long, untill all the others being tired, and forsaking the Stage, there remained but onely one as sole victor; who, with a disdainfull look, contemning all the rest, assured himself of the victory.

Being therefore about taking up the Prize-Money there deposited, out steps the Countryman, saying, you shall not have the reward, except you beat me too off the Stage: Fight therefore he must with the Countryman, or forsake the prize; but promising himself an assured Victory, he exerciseth his most curious and artificial postures, which he had learned in the fencing School, thereby to make a speedy dispatch with the Countryman, supposing that the Countryman would be frighted, and laying down his Weapons, quit the Stage. The Countryman being no ways scared stood very quiet (as confiding in his own

strength) so long, till the Fencer approaching nearer with his oblique Flourishes, made as 'twere a Wheel afore his Nose, whom the Countryman struck all along, with such a smart blow as made the Hair of his Head flye off, and the Bloud run about his Ears. So artificial a Combatant as this being o'erthrown, he was asked by that plain Countrey Fellow, whether or no he would yet once more try the fortune of the Play, but he would no more prove the Countrey down-right blows of a Non-Citizen, but left both the Money and Honour of the Victory to the Countryman, who being asked how he durst adventure upon so artificial and experienced a Fencer, and could so o'ercome him, he replied, that he perceived the Fencer used many oblique Skippings, but was no strong Man: and therefore I opposed my strength to his artificial Flourishes, and so with one blow struck him down. By this History it is evident, that that finely Spun, and sophistical prating of the Schools, makes nothing to the purpose but a certain experience, and an infallible knowledge of things both is and so remains the sole Mistress.

For the sake of those that are lovers of divine and natural Miracles, 'tis expedient that I yet farther manifest some certain secrets of Salt, which are hitherto altogether unknown, and shall be shewn unto my Friends in my Laboratory. Nor do I at all doubt, but that some few will be found who will easily understand these things, and look on them as things credible. But I matter not, whether they credit me who speak the very truth or not. It sufficeth me that I can not onely perform the things I say, but likewise shew them to Friends, whereby they may be able to reap some benefit and profit therefrom.

Salt may be so introverted by the Operation of the

Fire, as that it shall lose its sharp properties, and acquire a sweetness, and be brought by the help of other Vegetables and of Water, unto Fermentation, and so yield a good and sweet burning Spirit, a clear, sweet, and strong white Ale, conserving its tast for many years; various drinks, not unlike in tast to the Wine made of Honey and Fruits of Trees, strong and clear Vinegar, and white Tartar, fully as profitable for such Operations, as the common and natural Tartar of Wine is wont to be used about, and may be with those others [afore mentioned] prepared with small charges.

The Air and Fire do in a short time transmute Salt, into true natural Salt-peter, which is no small profit.

The Fire doth likewise very easily endow common Salt with such kind of properties, as render it capable of fatning and dunging barren Fields, Vines, Fruit Trees, Hops, and all other Garden Herbs as well as Sheeps or Beasts Dung.

Salt is also so changed by the Fire in few hours time, as to put on a magnetick nature, and attract the moisture and water out of the Air, and to retain it with it self a long while, and therefore is not easily dried up by the Sun. Corn, as Oats, Barley, Rye, Wheat, Pease, Beans, and other Seeds being steeped in such a Salt for a Night, do by means thereof, grow up the speedier out of the Earth. It is very profitable therefore in the Summer Season, wherein there's scarcity of Rain, and especially in sandy Grounds, because it holds the Rain Water a good while, so that it is not so easily dried up by the Sun. Besides, too, that Salt is of such attracting virtues as that one ounce thereof, being put in some little Glass to two ounces of Water, hardens all this Water, in the likeness of Salt, so as that you may carry the same

about you in a Paper; whereas there were two parts of Water to one of Salt.

This Salt abounds with yet many other wonderfull virtues, some of which I have declared in my Treatise, *of the Nature of Salts*, stiling it by the name of *Sal Mirabilis*, and that not without good cause. It is of the form of Salt-peter, and is void of all Acrimony, it is a little bitterish to the tast, and is of a Balsamick Nature. For being rub'd on Beef or other such like Flesh, it keeps the same, though exposed to the open Air, from being infested with Magots, and from being corrupted: And therefore it is an efficacious subject, with which as being a most efficacious Balsom, dead Bodies are conserved from corruption. It converts all things put into it, in long process of time, into an hard Stone, and abounds with many other wondrous virtues, which (for certain causes,) I pass by in silence at this time. *Paracelsus* calls it *Sal Enixum*, but I *Sal Mirabilis*.

Nor ought it to seem at all wonderfull, that common Salt doth so easily obtain by the Operation of the Fire, a better and sweeter quality. I do in very deed affirm, that not onely the common Kitchin Salt, but even those too, which are of a most biting corrosivity, as *Aqua Fortis*, *Aqua Regia*, Oil of Salt, of Sulphur, and of Vitriol, may by a certain sweet Vegetable, (without the addition of any contrary Salt) be brought to such a pass in three hours time, as that a Man cannot perceive the least Corrosion at all in them. Nay more, if this very Salt hath dissolved up any Metals, it does not part with them, but holds them still: so that the corrosive Solution of Gold which is made with Oil of Salt, becomes a sweet liquor, which likewise comes so to pass, with the Solutions of Silver, and of the other Metals: so that

by this way excellent Medicaments may most easily be made out of Metals.

New Wines being fermented with such a Salt, do change their Tartar into sweet Wine, and become clear in a months time, and suddenly have both the tast and odour as old Wines usually have. Certainly it is a secret of very great concernment, when by reason of the coldness of the Air, the Wines cannot attain unto their due maturity. *N. B.* There appertains to this fermentation, a singular and excellent Artifice, by which the Wines and other drinks are promoted to a speedy and strong fermentation, insomuch that the Wine boils in the Vessel, though the Vessel should be set out to the Snow and Ice in the coldest time of Winter: whereby the Wines must needs be made better, stronger, and sweeter. It is a very artificial invention, hitherto concealed by me, but now I am minded to reveal the same unto my Friends.

By the same Salt too, Wine, Ale, Metheglin, and other drinks may be in short time turned into good and sharp Vinegar without the help of the Sun, or of a warm Stove.

If therefore any one needs for his Operations any distilled Vinegar, he may even distill it in wooden Vessels, without any Sparkle of Fire, onely in the Air, by the proper efficacy of the liquors themselves, and by the help of the Air: and this in such wise, as that a whole Barrel of distilled Vinegar will not cost so much as one Token, the Barrels or Vessels excepted, which verily is a most Artificial Distillation.

Thus likewise by the same means may a sweet burning Spirit be distilled out of Ale, Wine, and other the like Liquors.

Any common Wine may be rendred so strong by the help of a certain sweet Salt and artificial fermentation, as that it cannot be drunk because of its strength. Some Pots full onely thereof, being poured into a Barrel full of small Wine, will make the same so strong, as to equalize it with generous Wine. He that is so minded may add some sweet Spices in the fermentation, and so make it the more sweet, more efficacious, and more wholsome, and so a little quantity thereof being poured into another Barrel will make all the Wine therein contained become sweet and good.

Out of common Salt may easily be made good Allum and Vitriol, no less usefull for the Dyers than the natural are.

It is likewise a thing easily feasible, and that too in few hours space, to turn the same into a fiery nature, and make it have the same property as the Salt made of Wood Ashes, and of the burnt Lees of Wine and such like, and as Pot Ashes have, and may serve for the Soap Boilers and be applied to the same uses that those Salts are used for.

Moreover, store of sweet Spirit of Salt may be gotten with small charges out of common Salt, serving not onely for the preparation of many excellent Medicaments, but also for the maturation of the meaner and unripe Metals, as we said afore.

These and the like wonderfull things, yea and very many such effects incredible to the unskilfull doth that contemptible and common Salt produce, to the exceeding benefit and profit of mankind: which excellent things I neither would nor could (for the honour of God, the giver of all good things, and for the sake and profit of mankind) any longer conceal. But some or other may object and say, if by the help

of common Salt, such great things may be effected, why do not you prefer the same before Salt-peter, which you have so exceedingly praised in the third Part of the Prosperity of *Germany*, and have constituted it the Monarch as it were of the whole World: whereas notwithstanding it is so venemous a Dragon as is wont to devour all things. Can't these two Salts I pray, namely the common and Salt-peter, divide the Government of the World between them, and bear sway and command both together.

To such I answer, that although that common Salt be the producer of many wonderfull effects, yet must it needs give place unto Salt-peter, which being inflamed and on Fire is wont to overturn huge Mountains, and blow them up into the Air, which thing seeing common Salt cannot do, 'tis but fitting and right that it should be dignified with so great a Title. However, being by the Operation of the Fire and Air made equal unto Salt-peter, and performing the same effects, it may then worthily be graced as Salt-peter is with the Title of Monarcy.

The effects which I have attributed to common Salt and Salt-peter, I can every hour shew, in very deed, to be most true. Ill therefore do they do, that bark against me for saying that Salt-peter is a universal Dissolvent, and that endeavour by their tatling reproaches to obstruct the truth.

Why do they not produce some better thing, seeing they will not admit of this universal Dissolvent? such Men as these do nothing else but bewray their own foolishness, and kick against the Pricks.

Had they ever done ought, or set their hands to work, for the sake of searching throughly into nature, they would never so boldly contemn, and

reject that, which they never as yet understood. They behave themselves very basely, and clearly discover unto all Men's view, that they have suckt in their uncertain and foolish Opinions, by the bare reading and hearing of uncertain and dubious Writers, whose meaning notwithstanding they understand not; for my part I remain constant in my Opinion, and say, that Salt-peter is an universal Dissolvent, and is able to dissolve all the things in the whole World, if it be made use of in three forms or shapes. Whatsoever the acid Spirit thereof, or the Eagle with its sharp Claws cannot effect, its fixed Salt, or the fiery Lyon will accomplish: and whatsoever is impossible to be done by these two, the Griffon which hath its rise from the Eagle and Lyon, will artificially perform.

N. B. The acid Spirit of Niter doth not dissolve sulphureous subjects, but mercurials onely: Contrarywise, the fix Niter doth not seize upon mercurial subjects, but sulphureous ones; but the flame of Salt-peter performs both: which verily is wonderfull, that things so unlike should in some few hours time be extracted out of one and the same subject. For the corrosive Spirit prepared out of Salt-peter by Distillation, and likewise the fix Salt, are most bitter enemies to each other, which ruinating and slaying one another, and being dead, return agen unto that which they were afore, and partakes of both natures; which the Ancient Philosophers do clearly point out unto us by the Griffon, which is headed and winged like an Eagle, and the hinder part of its Body like a Lyon, as we have mentioned more at large in the foregoing third part of the Prosperity of *Germany*.

Upon him that rightly understands this ancient Fable of the Griffon, Lion, and Eagle, doth the Sun

shine, for he will get no small profit to himself thencefrom. Whatsoever the Corrosive Eagle dissolves and tears a-pieces, that the fix and fiery Lion precipitates. And whatsoever the Lion devours, that the Eagle doth agen snatch from him: but they kill each the other, of whole dead bodies the Griffon exists, which hath the body of the Eagle and Lion. By how much the oftner this labour is repeated, so much the more potent and stronger doth the Griffon come to be, [especially] if both the Eagle and the Lion have filled themselves with food and are grown fat; or by how much the bigger the Eagle and the Lion are grown, by such Subjects as are agreeable unto them, afore their mutual fighting; the Griffon doth also become of magnitude proportionable.

Once every day therefore may such a conflict, slaughter, revivification, and transmutation of these two fighting and capital Enemies, *viz.* the Eagle and Lion into the Griffon be made. But if you would have it profitable, then must *Vulcan* sharpen *Saturn*'s Sythe, by which he may divide the Griffon [in twain,] and may turn whatever proceeded from the Eagle, into the Eagle again; and may transmute that which arose from the Lion into the Lion agen. When the dominion of the Griffon is divided, and that the Eagle bears sway onely over his birds, and the Lion onely over his beasts, like two Kings, then all is well, and there's no war. But if once the Eagle endeavours to snatch away from the Lion his prey, then ariseth a great war, and of so long a continuance, till they have slain each the other, of whose bodies the Gods doe make the Griffon. But when the Griffon becomes too disdainfull, and affecteth Tyranny, and designs to bear rule over birds and beasts together, he is agen divided by *Vulcan*, by the perswasion of old *Saturn*, that so he may return by a reiterated transmutation

into the Eagle and Lion: which wheel [or rotation] of reciprocal transmutation doth never rest, but converts it self [or turns it self round] in a perpetual course for Man's punishment, as long as it shall please the most high God, who, at last, will put an end to all fightings, slaughter, and contention, that afflict this world: at which time all the Eagles and Lions which ever were in the world, shall be turned into the Great Griffon, which will rend and overthrow the whole Earth.

This time all pious Souls doe expect and wait for with ardent desire, and many sighs, that they may be at last freed from the talons of the Eagles, which rend all things a-pieces, and from the claws of the roaring Lions, and enjoy everlasting peace and quietude.

Thus much may suffice to have been spoken of Salt-peter at this time, which, how it may be prepared very plentifully, and with great profit, out of the Salts of Vegetables, Animals, and Minerals, I have already declared in the foregoing third Part of *the Prosperity of Germany*. He now that dreams of so managing his affairs as to reap benefit and profit to himself thencefrom, may inquire into the business by a more accurate meditation and search. Yet let him know, That Salt-peter may be very easily made of many vile Subjects, which may be every where had: of which Salt, if you have plenty, you cannot want other things. For not onely most excellent Medicaments against all kinds of Diseases may be made with Salt-peter, as likewise the growing faculty of Fruits springing out of the Earth, be promoted, as of Corn, Wine, and such-like things necessary for the sustaining of the life of Man; but also pure good Gold may very easily, but with great profit, be gotten out

of the imperfect Metals.

Seeing then, that by means thereof, a man may be supplied with firm health, food, and rayment, and with Gold and Silver, what other thing is there, I pray, that he can want? That which I have so often said, I doe here repeat and affirm, That there is not in the whole World any subject that can compare with Salt-peter, much less be preferred before it.

Such a noble, yea so kingly a Subject therefore as this is, well deserves to be most highly honoured by us, and to be searcht into by the utmost of our endeavours, because of the so great benefits it bestows upon Mankind. We will therefore proclaim and pronounce Salt-peter to be the Monarch of the whole World, though all its and my enemies, who endeavour to bespatter our honour and repute with the brands of infamy, doe even burst for malice.

O most foolish men, with how vain a hope doe ye expect the Lion and Monarch from the North, as the *Jews* doe their Messiah, who came above 1600 years ago. The Lion of the North, and the Monarch of the World is even at this time present, and hath always been, but yet hath been known but by a few; the full and perfect revelation of which, God alone knows. I doe verily think the time is now at hand; These things which are known unto us concerning him, are all of them but particulars, and very few too. But if the said Northern Lion shall find out and dig forth the treasures which lye hidden in the Mountains, then will he at last exhibit his power to be seen, and shew himself to be the Monarch of the whole World.

Salt-peter is that great and fire-spitting Dragon, the keeper of the Golden Apples, and that venomous Basilisk which kills all things with his looks. If he be but fixt and made constant in the fire, then is he that

Salamander living in the fire, and that Phœnix the bird of the Sun, which having gathered pure Gold out of the Sand, useth it to the making of her nest, and arriving to its utmost old age, burns her self; out of whose Ashes other Phœnix's are produced.

He that desires to know more of the Griffon, Phœnix, Dragon, Basilisk, and Salamander, all which doe exceedingly thirst after Gold, and dig it out of the Earth and keep it, may read *Pliny*, and other the ancient Writers of natural things; as also *Ambrosius Calepine*'s Dictionary of eight Languages, and of the last Edition.

The Conclusion.

These (O friendly Reader) are the things which I was willing to publish at this time for the Countries good; Had I had more time and opportunity, I would have added more profitable secrets, and such too as are of no small moment. If I find that these here written are acceptable, I will in a subjoyned Appendix make a clearer interpretation of such obscure places as may be herein met with.

N. B. I would have the friendly Reader here know, that although I have written these Four Parts of *the Prosperity of Germany* clear enough, above my other [Writings] [or more clear than the others] yet notwithstanding I have reserved for my self and my friends somewhat amongst all the Processes, and ways of operation, so that I know how to effect the preparations of Salt-peter, and to make use of its various properties, in extracting Gold and Silver out of the Oars, and in the melioration of the imperfect Metals, and transmuting them into Gold and Silver much easier, and far more compendiously, and with much less costs.

The things which I have written, I have written for every one, Friends and Foes together; The other, and those better Secrets, I have reserved to my self and my friends. This shall now (God willing) be my chiefest care, that my Laboratory, in which the truth of the whole business shall be shown unto my friends, may be fitted up and made ready. In the mean time, the Princes and Noble men, whose territories such metallick treasures are in, and cannot be extracted by the help of common fusion, may consider, whether or no it will be agreeable to their minds to make use of these my Artificial, and not vulgar Operations in extracting the Gold and Silver by Salt and Salt-peter out of such-like auriferous subjects. If it shall seem unto them a thing worth while, to institute such operations for the profit of their Countries, they may send unto me a fit person, and one that knows how to deal in the fire, and one that is of a silent disposition, and of good education, who may learn the very work it self in my Laboratory.

But they that are Lords of such places as doe not contain in them those auriferous Minera's or Oars, and can nevertheless get store of them from the bordering Countries, and are desirous of amending them, and using them for their profit, we deny not to shew and disclose the Art unto them too, (the persons always considered,) namely that artificial and moist Extraction of the volatile and fix Gold, not onely out of Minerals, Stones, Sand, and Clay, but likewise out of the already-molten Metals themselves, as Lead, Tin, Iron, and Copper; in which Metals, there is often times hidden much Gold and Silver, which admits not of being extracted by the common melting Fire; but is easily drawn thereout of, by the maturation and separation that is caused

by Salt and Salt-peter, and so brought to common use.

All these things we will not be loth to make friends partakers of, as likewise of other rare and artificial inventions, and such as are profitable to all kinds of men, none excepted; which are such things as will bring much profit to my Country, and shall be shewn in my Laboratory, publickly, and privately unto friends: but with this proviso, namely, if the said friends will faithfully promise unto me, that they will with a faithfull silence conceal those secrets which they shall see and learn from me, and improve the same, onely to the honour of God, to the comfort of the sick, to the help and succour of poor Widows and Orphans, and to the defence of the Truth; and not use them to Diabolical disdain, and detestable pride, and other fooleries and vanities.

The End of the Fourth Part of the Prosperity of Germany.

THE FIFTH PART OF THE Prosperity of GERMANY.

Clearly and Solidly demonstrating, and as it were shewing with the Fingers, what Alchymy is, and what benefit may by the help thereof, be gotten every where, and in most places of *Germany*. Written and Published to the Honour of God the giver of all good things, primarily; and to the Honour of all the great ones of the Country; and for the Health, Profit, and Assistance against Forreign Invasions, of all their Inhabitants that are by due right and obedience subject unto them.

Like as the weighty command of God injoyns all Children to love their Parents, and to submit themselves unto them, with a due obedience in all lawfull and equitable things, and to yield them due

fidelity: Even so likewise doth he require from every subject a due obedience to their particular Magistrates, that they most willingly obey them (with a faithfull observance, as being the Fathers of the Countrey, and to whom they are tied by all right of Fidelity) in all such things as pass not beyond the boundaries of equity, and withall it behoves each such subject to communicate any thing whatsoever that is requisite for their safety and defence, and for the repelling and beating off the Enemies.

The consideration of this dutifull service, which binds every Subject to his Magistrate, stirred me up (seeing that greivous and sudden Fire which almost destroyed all the Kingdom of *Poland*, and therefore fearing, lest by dilating it self it should also detriment our Countrey) to take care in publishing, some four years ago, a little Book intituled the first Part of the Prosperity of *Germany*. I therein taught, by what means the vast plenty of Corn and Wine might be so concentrated as to be easily preserved and kept, and so be made serviceable for the common good, and of exceeding profit, in future calamitous times.

I likewise shewed the way and manner of some other Arts, and such as are most usefull for the common good of the Countrey, 'mongst which, that discovery of making Salt-peter out of old and rotten Wood, (from which may a vast quantity thereof be had) is none of the meanest.

I have also bethought my self of another way of pleasuring my Countrey with no small benefit afore I die, and thus I intend it.

First of all, I would have the whole World know by this small Work or Treatise, that I have a mind to demonstrate the most profitable and principal secrets

which I have treated of (partly openly or plainly, and partly obscurely or more darkly) in those four parts of the Prosperity of *Germany*, and that both to the high and low in my publick and private Laboratory, afore this year is run about. To this end, I have already the chiefest and most necessary Utensils at hand, and when all the necessary provision is gotten together and made ready, those said *Arcanums* which will be so exceedingly profitable to the Countrey, shall be visibly demonstrated to such as the chiefest Magistrates shall make choise of, and to other honest Citizens and Men of the Countrey. And amongst these *Arcana's* which are of such great benefit, the three following ones are the most principal.

The first is, the making of good Salt-peter out of contemptible, and every where obvious subjects.

The second is, how by the help of this Salt-peter, easily and copiously to extract the fugitive, and the fixt Gold and Silver and Copper out of the *Minera's* or Oars, with a great deal of profit and mighty advantage, and that without any melting or fusion by Fire.

The third is this, the truth and certainty of Alchymy shall be shown, and it shall be proved, that it is not any vain dream, deceitfull Phantasie or Fallacy, as the greatest part and number of its haters and *Ignoramus's* have hitherto slanderously reported; but that it is a most true Artifice, and of wondrous consequence, by the help of which, (it making use of Fire and Salt,) all contemptible Minerals and Metals, and which are of no great gain, as *Lead*, *Iron*, *Tin*, *Bismuth*, *Cobolt*, *Zink*, *Lap Calaminaris*, *Marchasites*, all other fugacious Minerals may be so fixed and ripened, as that much and true and constant Gold

and Silver may be extracted out of them with small costs, but abundance of profit.

These three secrets verily are in my judgment of great moment and therefore are worthy for the great ones, and Princes, and other Fathers of the common Weal to be made partakers thereof by revealing the same unto them.

I have deemed it worth while, in a few words to illustrate the incredible utility thencefrom arising, that any one that hath but any reason may perceive it.

And first, as concerning Salt-peter, the whole World knows what profitable and needfull a subject it is. There can never be so great a quantity thereof prepared, but it may not onely be applied to necessary uses but also to such as bring a great deal of profit. I forbear to speak of its most great use and exceeding profit in making Gun-powder, which no Kingdoms, no Common-wealths can want to defend their Countrey withall, and drive off their Enemies.

And if there were no need of it for this thing, yet would it be of mighty moment, and bring in abundance of profit by extracting Gold and Silver out of the poorer Oars which will not bear the charges of melting, and now there will never be so much Gold and Silver, as that it will not be of any profit to a Countrey.

Nay more, if there were no want of Gun-powder, nor of Gold nor Silver, (which time when ’twill come, and how it should come, for my part I cannot see) yet (having Peter) we cannot be in want of Bread; and how great soever the plenty is of Wine, and Corn, and Fruits, yet there is never wont to be too much. Corn and Seeds being macerated with Salt

peter afore they are sown, and the Roots of Vines and Trees being moistned with a very little of its liquor, do not onely grow more plenteously, but also produce more plenty of Fruits, and such as ripen far sooner, and are of a sweeter Tast, than if they were dung'd with that stinking Beasts Dung liquor. If then, Salt-peter be a subject so excellent, as that we can by no means want it, and that it may so easily be prepared out of Wood and Stones in plenty; if above all other things it makes the Earth fruitfull, if it can extract plenty of true Gold and Silver out of the contemptible Sand and Flints, what can we desire more from it, unless it be a sound and healthfull Body, whereby we may in fulness of health quietly and peaceably enjoy such great benefits vouchsafed us by God? But now this very same Salt being justly called the wonder of the World can bestow upon us, this very health we speak of.

I do affirm that Alchymy it self, or the Transmutation of the lesser, or meaner Metals into the greater or more noble, and into Gold and Silver, is not a vain dreaming dotage, and an opinion void of reason, but is the very truth it self, and confirmed by many experiments; the demonstration of which, I do, God willing, this Summer not rashly but advisedly set about shewing it by publick and evident experiments, and its use for the good of the Country.

Now then, forasmuch as the Countrey is every where sufficiently stored with Iron, Lead, Salt and other mineral matters, and such like contemptible subjects, and yet notwithstanding there is not at present any profit arising thereby; verily it cannot be, but that in a few years time (if such melting Houses were in all places made) Men would be

rendred Masters of great Treasures. Who knows what God will do, and whether or no it may not so come to pass, that it may be said of the great ones of [our] Countrey as is mentioned in Holy Writ concerning *Solomon*. And he made Silver as plentifull as the Stones that lie in the Streets, *&c.*

But that I may yet more open the Eyes of the Studious after all, and show them, by what means all these things may come to pass, and fall out true, I do hereby assure him, that there's no need of taking those Metals for this Fusion, that are already pure enough as Iron, Lead, Tin, and already fit to be imployed about Mans use; no, those common and sulphureous leaden *Minera's* or Oars which are found to be uncapable of yielding profitable and venal or sellable Lead, are well enough for this Fusion and operation we speak of; and so likewise those Irony and Coppery Oars, out of which (seeing they admit not by nature of any fusion or melting) mallable fusile Copper or Iron cannot be extracted. For this Operation of ours needs not Copper, Iron or Lead to work upon, as being content with those poor sort of Oars, and with the bare Salt which the Earth is every where well replenished withall, so that there's no cause to fear that there will ever be a want of any matter for such an Operation.

But what need I speak much of these unknown, and so very profoundly hidden secrets of nature, seeing I have openly enough taught already, in the second part of the *Miraculum Mundi*, by what means, pure and natural Gold may be gotten out of every Herb. This very thing I publickly demonstrated in my Laboratory above a year ago, in the presence of most learned Men, Professors, Doctours of Physick, and other Men both noble and ignoble, as their

Testimonies, which are [under] hand affirm.

But there's no need of that, forasmuch as the manner it self of the Operation is published in Print, and manifested to every one, and there can hardly pass over one years space, but that even a thousand Men or more may imitate the Operation and search into the truth it self of the business.

But that the well minded Reader may have a little more light, and may himself see what foundations the work I have undertaken is built upon, I have judged it altogether necessary in a few words to set afore your Eyes, what Alchymy it self is, and whether or no it has any foundation in Nature and Art. For if so be any ingenious Man gives an Herb, an Animal, or a Man any name, certainly he does it not rashly and without any ground, but well knows and understands for what cause he intitles any thing by such or such a name, and it is chiefly done on this account that by such assumed names the nature of the Herb, Animal, or Man, and its properties might be known. A few Examples will illustrate it the more.

What reason have the Physicians and Philosophers of old to call the Herb St. *Johnswort, perforata*? Because its leaves are full of small holes, and it is so signed by nature, to shew, that it has eminent virtues [and peculiarly appointed] to take away and cure external and internal stabs and wounds of the Body, and this is confirmed by experience. Why are some Herbs called *Saxifragers*? because their nature is, to cleave assunder and break through great heaps of Stones in their growing up, and to penetrate through old Walls, by the growth of their hard roots. Their Seeds likewise are like unto the smallest Sand and after a sort stonyish and do break the stony matter in the Reins and Bladder of Man's Body and bring it

forth. So a Serpent hath its denomination from creeping, because it wants Feet, and creeps and crawls along on the Earth.

A Shoemaker hath his title from his making and sewing of Shoes. A Black smith is not wont to be called a Gold-smith, because he works not on Gold but on Iron, and he hath his denomination from Iron, which he is occupied about.

The same is to be understood of the word Alchymy, which denoteth no other thing save a Fusion and liquefaction of Salt, and so it teacheth us, what cause it was for, that the Ancients called the Transmutation of Metals Alchymy; *viz.* because of the fusing or melting of Salt, without which, no particular Transmutation of the viler Metals can be perfected and accomplished. Therefore it was not an unadvised and rash action that the Ancient Philosophers did when they put the title of Alchymy on the Transmutation of Metals, but as a Gold-smith is so called from the Gold, which he is a Labourer in, so is it with this.

The name therefore doth openly point out the matter transmuting the baser Metals into the more noble, *viz.* Salt, which being as an universal Agent does not onely maturate and bring to due perfection the Metals generated in the Bowels of the Earth by a natural Operation, but it also does the same out of the Earth by the Operation of Art, Salt alone, and Fire alone are sufficient for the maturation and transmutation of the unripe Metals. For Salt (as being the Agent) is driven or forced as 'twere by the Fire to display its virtues upon the Metals and by exercising its power, to render them better and more noble, as *Paracelsus* openly witnesseth in his *Cœlum Philosophorum*, saying, that the Corporal mixtion of

metals though commixt a long time and kept so in Fusion, is neither wont to give, (nor indeed can contribute so much as ought to their Transmutation. But if so be the metals are to be perfected by any amending, they are to be conjoyned in a spiritual commixtion, and so they come to their hoped-for amendment; and this is very agreeable to the truth, and evidently signifies, that without a saline agent and fire, there is no way of attaining to a particular transmutation and bettering in the metals. *Elias* the Prophet, whose name inverted yields the word *Saliæ* [or Salts,] did not work his most great miracles afore he came into *Zarpath*, or *Sarepta*, that is, into the melting House [or fusing Work-shop] where he filled the poor Widows Oil Vessels, that so she might have wherewith to live in a time of scarcity. For as long as the terrestrial Salts do lie hid in barren and stoney Mountains, in which there grows nothing but *Juniper* Bushes, and are [there] nourished by the Stars, they cannot shew forth their wonders, but they are wont then to disclose them when they come into the melting Houses. Even so is it with Salt, when it comes into the melting Shop, it doth effect so much as not onely to fill the Oil Barrels but the Cellars and Barns too, and that plentifully, but especially when the due [or suitable] Salts *Elias* and *Elisa* do come together, and *Elias* is carried in his fiery Chariot into Heaven, and sundred from *Elisa* and doth send down a double portion of his Spirit upon *Elisa* his Companion; by which, *Elisa* being strengthned and acquiring more strength than it had afore, is made fit for greater and more powerfull Operations.

But amongst those most great miracles, this was an eminent one, that after the departure of *Elisa* the Prophet out of this life, there was another dead Man thrown into his Sepulchre who by the touch of his

Bones was restored to life.

Therefore, like as this miracle did supernaturally happen by the divine power: Even so [doth it come to pass] naturally, by the virtues of our *Sal Mirabilis* corroborated with a double Spirit, which doth not onely restore a dead [body] and Wood turned by the Fire into Charcoal, when it is cast into the Sepulchre, that is into the Earthen Pot or Crucible to the white Bones of our *Sal Mirabilis*, and bring it (in the space of one quarter of an hour) unto its former viridity and life, and with this very green Liquor of the Wood may other half dead Trees, as also other things be restored to viridity, and increase, and their former fertility, more than by any thing else: But also, even various dead insects, if they be put to our *Sal Mirabilis* can recover life again. And although that this may seem a new unheard of, and incredible thing, yea a meer Paradox to any one, yet is it as true as truth it self; the true way of which Operation I will (God willing) describe and shew clearly in the first Century of my general Appendix.

But although that these wonderfull Operations of my *Sal Mirabilis* may seem such, as to be never capable of being effected yet, to all such as know its Composition, 'tis a thing very easily accomplished. Nor can it be but that the divine wonders should be still more and more laid open by the help of my *Sal Mirabilis*, and be exceedingly sown abroad, and made known to such as are ignorant. Which being done, the World will conceive a far other guess Opinion of Alchymy, and judge otherwise thereof than hitherto it has done.

But that such as are admirers of the divine and natural wonders, may clearly see how large an extent those things I have hitherto discovered, are of, I

cannot omit the adding of the solar Work or Smaragdine Table of *Hermes*, the Father of all the Philosophers, the which being in my judgment accommodated to this discourse of mine I will illustrate.

But to summ up all I will say, I have here briefly declared, that if a Spirit be elevated or sublimed from a true Salt by the help of a strong Fire, or be drawn from out of its Body, and be again returned to the same own fixed Body left behind and be restored to it in a due manner; that fix Salt, gets double the strength and virtue it had, (as hath been shown concerning my *Sal Mirabilis*) and does perform things wonderfull; which *Hermes* and *Basil Valentine* have hinted unto us in these next ensuing expressions.

Hitherto belongs the small Circular Figure, noted Pag. 19. *at the beginning of the* *third Part of the Prosperity of* Germany.

The Smaragdine Table of Hermes*, &c.*

[See it at the end of the First Part of *Miraculum Mundi*.]

The Ænigma of Brother Basil Valentine.

There is a Stone, of all others the least precious, out of which is extracted a fugitive [or volatile] Fire, and out of this Fire is the Stone it self made, it is of colour white and red and yet is it no Stone. In this Stone doth nature operate, and produceth a Limpid or clear Fountain, which choaketh in the Waters and swallows up his own fixed Father, untill at length a Soul be given [or restored] him, and [his] fugitive Mother be made like [him] in the Kingdom. Likewise

this Stone brings power and great strength, it exceeds the Sun in Age, [its] fugitive Mother [is] prepared by *Vulcan* and [its] Father [was] begotten by the Spirit. Likewise the Soul, Body, and Spirit consist or abide in two, out of which, all things are; these things are of one, and is one thing, conjoyning the fix and the fugitive. They are two, and three, and one, and if thou art ignorant of this, thou will be frustrated and deprived of the effect of the Art.

Adam is placed in a Bath, in which *Venus* finds her like, now this Bath was prepared by that old Dragon, when he had lost his strength and power. But now this is nothing else (saith a Philosopher) but a duplicate *Mercury*. In this is its name hidden, which is to be sought after with all diligence and continual labour.

The Event proves the Actions.

It seemed unto me very expedient to set down here in this place, these few, but exceeding weighty words of *Hermes* and Brother *Basil*, because they do so notably square with this Work of mine which I have here described. And therefore I do here again affirm what I have often said, *viz.* That he who knows Salts well, but especially Niter and Vitriol, and knows how to conjoyn them, is well skilled in Medicine and Alchymy; and sufficiently enough understands that the Smaragdine Table of *Hermes* is Vitriol, an excellent Smaragd or Emrald, and that Niter is (according as *Paracelsus* and *Basil Valentine* have at large described) the Kingly Infant of the Sun, with whose descriptions we at present content our selves. I will make a more prolix mention of the same in my Centuries, those things that I have adjoyned here I could not, for certain reasons let slip and pass by.

Now by these few words it is manifest, what virtues Salts are endowed withall, and what miraculous effects they shew, when they are cast into the melting Fire, *viz.* Such Salts as are corroborated with a double Spirit poured down from above. These Salts (I say) are wont not onely to fill the poor Widows Oil Vessels, but even the Cellars and Barns with Wine and Corn.

But I would not that any should interpret it amiss, in that I make some kind of Comparison 'twixt the wonderfull virtues of Salts, and the miracles of the Holy Prophets: For verily the thing it self admits it, and by such Comparisons, the natural light is greatly strengthned, which thing we shall speak more at large of elsewhere.

Whosoever he be that well knows the nature and properties of Salts, and is something skilled in the management of the Fire, he will hereby easily learn thus much, as easily to perceive that there is such a thing, as a profitable transmution of the more vile Metals into the more noble ones.

But there are requisite to this Operation manual Arts, peculiar Furnaces, and singular Commixtions of Metals, the knowledge of all which, he must have that desires beneficially to employ himself in these Operations. The whole Operation with all the appurtenances requisite, and all the things thereto appertaining, shall (if God please) be exposed to be seen in my Laboratory this Summer. As my Writings lately published, and the Labours performed in my Laboratory the last year, do sufficiently enough testifie that I have both publickly and privately demonstrated and manifested the truth of the chiefest secrets which I have mentioned in my Writings. And as for what remained of being done

the last year, this present Book promiseth the demonstration of, this Summer. What Writer alive, did ever endeavour the demonstration of the truth of his Writings by most evident experiments? None at all save *Glauber*.

Therefore I doubt not but that seeing this little Book offers the Countrey such great benefits and Commodity, there will not onely be some of the Vulgar sort, but also many of the Noble ones [or Magistrates] be found, to whom the reading of the same will not be a tedious thing.

And now I return again to speak of Alchymy, openly disclosing my Opinion concerning it, and firmly averring, that Salts onely have power to wash, maturate, and perfect the unripe Metals.

But some of ther may here say, if Alchymy be the fusing of Salt, by what means can it possibly ever be, that Gold and Silver should be gotten out of Salt by melting? If there were Gold in it, cannot it be gotten forth easier than by melting in the Fire? I answer, you are not so to understand it, as if huge heaps of Gold could be gotten by a bare fusing and melting of Salt. No! no such matter. But when the Metals have Salts adjoyned to them in a due manner, and so undergo a melting Fire, they do (in that fusing) display their virtues upon the Metals, and do so bring them to a maturity as to yield forth Gold and Silver. For Salts are the universal ripening Agents, both in the dry and in the moist way, as is clearly evident from the third and fourth part of the Prosperity of *Germany*, so that there needs no more to be spoken as to this.

But yet, that these things may not seem new, or altogether absurd, I say, that in all Salts there lies

hidden spiritual Gold, but yet it cannot be extracted from them without the addition of the Metals. For all the things that are, are generated, encreased, and sustained by the Sun, (and amongst these may be reckoned up the smallest Vegetable) do contain the fugacious beams of the Sun hidden in them, which said beams may by the benefit of Art be made corporeal and fixt. This I taught and demonstrated more prolixly in the second part of my *Miraculum Mundi*. I will teach the same in the first Century of my general Appendix, which said Appendix shall illustrate all my Writings with more clear notes; and I will evidently show the way, by which true and natural Gold is to be gotten (by the benefit of a certain precipitating matter, out of Sea Salt, both by the dry and by the moist way. This Operation brings not any considerable profit, but doth in very truth show the possibility of the thing. But he who knows the way of conjoyning true and due [or proper] Metals with legitimate [or suitable] Salts, and of handling them in a due and true way of Fusion, will get Gold and Silver out of all the imperfect Metals, and that with no small profit; and this shall be demonstrated in my Laboratory this present Summer by God's help.

And for the more evident proof hereof, it seems worth while to adjoyn a Story out of the Journal of *William Litgou* of *England*, [rather *Scotland*] who Journying through *Italy*, testifies that he saw in *Trapundia*, a City in *Sicilia*, much Gold excocted or drawn out of Sea Salt; which thing, seeing it agrees with my Opinion, and confirms what I say, I will add the Words of the Authour himself as they are in *Latin*.

"The fourth City of *Sicily*, is *Trapundia*,

> scituate in the West-side, and opposite to the City *Biserta*, seated on the *Barbarian* Coast of *Africa*, which yields pure Gold, which is exported by the Merchants into *Italy*, *Venice*, *Dalmatia*, and *Greece*. It is excocted in some Artificially made Salt-pits by the more vehement beams of the Sun, which Pits are filled and emptied every month. Now the Salt here on the Sea-shore, has a colour like the redness of a Ruby, or Corral: The City is almost the one half of it imployed about working thereupon. The Gold it self being purged is distributed throughout the whole Christian World."

These are the words of the said Authour, I know nothing of the certainty of the thing it self, he that is desirous to find out the truth of this Relation may easily do it. As for my self, I easily credit this Relation, because of the Mount *Ætna* which always is burning in that Island, and because of the Sulphur too, which all the Land of *Sicily* abounds withall. And verily it seems a thing altogether likely, that when the Inhabitants of this Island upon the Seashore, make Salt of the Sea Water for their necessary use, by digging Pits in the Earth after the manner of all those hot Countries, and letting in the Sea Water, and that the warm beams of the Sun separate [or any of] the unprofitable sweet [or insipid] Water, in Vapour, and that that Water of Salt is endued with a notable sharpness; it extracts the Sulphur out of the Earth which is there in plenty every where, and it renders this [Sulpher] by the help of the heat of the Sun, constant, corporal and fixt, so as that it can be afterwards molten in a melting Furnace into Gold. If now the most hot beams of the Sun, and Salt Water

can change common earthly Sulphur into Gold, why may not the same be done also by the benefit of Fire, Salt, and Art.

That all Gold is at first naturally generated of a pure Sulphur in the Earth, no body will indeed deny. That any Sulphur may by the help of Fire and Salt be fixed and changed into natural Gold, daily experience witnesseth, not onely in my own Laboratory, but in my Disciples Laboratories too, the which, visibly demonstrates, and even by manual Operation confirms the truth of those things which I have mentioned in the second part of my *Miraculum Mundi*, hereabouts.

That which is mentioned in the old Hymn of the Ancient Church-Fathers, *viz.* who made Gold of Rods or Twigs, and Gems of Stones, seems to the ignorant altogether as Paradoxal, new, and incredible: and from which 'tis gathered that St. *John* the Evangelist made Gold of Sticks of Wood, and Gems of common Stones: I can in a few words demonstrate that both are true.

Dissolve common Sulphur, or any Vegetable in common Salt, this Solution will make the Sulphur of a red colour. Keep this Solution for at least one hours space in the Fire, you shall find a little of the Sulphur changed into Gold; to the red Salt, adjoyn the Calx of *Saturn*, melt them by Fusion into one Body, and reduce the Lead by a Cupel, you shall find a grain of Gold, it yields indeed no profit but demonstrates the certainty and possibility of Art. But if any one shall be skilled in managing this Operation in great quantity (as shall be done this Summer in my Laboratory) he will not complain of loss, but will always get profit.

But let this suffice as to the making Gold out of

any Wood, or any Herb, by the help of Fire and Salt.

Let us now see by what means Stones of manifold colours may be made by the help of Salt, out of Wood or any Herb. Adjoyn to the red Salt made of Wood, a little Powder of white Flints, put them in a Crucible, and melt them in the Fire, that they may become a red Glass, resembling almost the colour of a Ruby; if you keep them longer in the melting, the red colour will be changed into a green, and have the likeness of an Emrald: After this, comes a sky-colour, resembling a Saphir, then follows a yellow, not unlike a Jacynth: then in a longer continuance of Fire, it becomes black and like an Agath. Indeed these Stones are no harder than common Glass, but as to their colours and beauty do exactly resemble the precious natural Stones.

These two *Arcanum's* indeed do as to the outside view seem not very excellent, but yet I believe, the well minded Reader, to whom I offer them as a pledge or Love-token for to remember me by, will not think them (seeing they teach the extracting of Gold out of any Wood or Vegetable, and how by white Flints to make Stones of several colours) of so small a moment or value, as they appear here to be, but will believe that he has a foundation laid open for him, to arrive to greater secrets.

As concerning these kind of wonderfull things, and Transmutations hitherto unknown to the World, and changing things into more noble and better Species, I will treat more at large in the ten Centuries, in which, my Writings shall be declared with more evident and clearer Explications, to which I refer the well minded Reader, concluding this Book with those Verses of *Ovid*.

Jamque opus exegi, quod nec Jovis ira, nec Ignis,
Nec poterit ferrum, nec edax abolere vetustas.

And now, a work I finisht have, of which, Jove's *wrath, or flame,*

Or Sword, or all devouring time can ne'er raze out the name.

An APPENDIX
TO THE
FIFTH PART
OF THE
Prosperity of GERMANY.

Clearly and perspicuously revealing and declaring, (for the benefit and profit's sake of the whole Countrey) by what means those three *Arcana's* promised in the said fifth part are to be advantageously effected. Together with an adjoyned Explication of some obscurer places which are not so clearly disclosed in the third and fourth parts of the Prosperity of *Germany*, as likewise in the first Century.

Friendly Reader,

I doubt not, but it will seem a wonder to many, that

Arcana's *of so great moment and so much utility should be laid open by me, in so perspicuous and evident a description, as for every one thoroughly to know them.*

However, any Body may easily perswade himself that I have not so done without weighty causes, which to reckon up here at present, I judge it not so altogether necessary, but that it will be more commodious to refer it to some other convenient time. The chiefest and which is the most over-swaying reason amongst all the rest, is this, viz. *the perverseness of some abusive Men, not onely endeavouring to make my Writings envied [or hated] by Men of common rank, but also by the great ones, by their lying reproachfull slaunders; and especially most falsely averring, that those three* Arcana's *which I promised in the Fifth Part of the Prosperity of* Germany*, are of no profit, and therefore cannot be effected with any advantage, and that I my self sought after nothing else by promising their discovery, save onely by imposing them upon [or selling them unto] others to scrape some Monies together. Now forasmuch as this is the property of Slanders, to be admitted far easilier and readilier than the truth it self, and that for this reason many have diverted their minds from the truth of this thing by busying them about these Calumnies, and so have not known how the case stands; but (on the contrary) seeing I am conscious of mine own Innocency, and am far wide of those Crimes so falsely charged on me, I have judged it most just and most highly necessary, not to suffer those most false Accusations to rest upon me, but to shew the contrary to the Eyes of the whole World, and by demonstrating and disclosing the very truth it self, to recover my honour so perfidiously and treacherously snatcht from me; the which could not possibly be done by any better way than this.*

Necessity therefore required the Work it self to speak, and to defend its own self, which indeed is a true and genuine defence, and way of stopping the shameless and lying Mouths of all reproachfull Slanderers. God will in time recompence such false Mens most wicked Works, whereby they have exceedingly injured me. Mean while every one may apply these most profitable inventions to their use, and undertake the doing one or other of the Operations whereby they may reap some benefit, which I wish them from my Soul.

Nor do I doubt, but that a very many Men will, by following the Doctrine by me prescribed, and insisting upon the foot-steps of my Writings, which are founded on the truth, as being a sure Foundation, get themselves no small profit*; whilest they quietly and peaceably enjoy the gainfull practising on my* Arcana's*: And especially of that most easie secret, by which, fugacious and volatile Gold is extracted out of all kinds of Flints, (every where plentifully offering themselves, and so by the help of Lead, is rendred Corporeal. Which Work verily is such, as that one Man doth no ways damnifie another by, but may rather help and profit him. Therefore do I at present affirm to every body with that truth which God loves, and will defend, that all the following Operations which I manifest in the publishing this little Treatise, have been wrought by me not once onely but often times, and have been shown to many others, so that no body has any reason to doubt hereof, nor need he be sollicitous about any other thing but how wisely to manage, the Operation, and to be diligent about his labours. But if it should so fall out as that a Man should commit an errour or two, which may easily happen, let him not ascribe the errours he commits, to the Art it self, and thereupon to accuse it of falsity, but let him rather inquire into the occasions and reasons of his own errours, and without doubt by such enquiries*

will he attain his end, and get the hoped for fruit: in which thing, my first and second Century will by an easie Manuduction help him.

These are the things which for the truths sake and to witness it, was I willing to produce. And I do hereby signifie to every one that now my publick Laboratory is at an end, and shall remain shut for time to come, which I was willing every one should know.

[The first] Operation shewing the way of reducing any Lead, or any Vein of Lead by the help of common Salt, [and] by Coals, into Ashes, in the Furnace called Stichofen*, that so the Gold and Silver may be extracted with profit.*

Take of Lead or a Leaden Vein two parts, and of common Salt one part. The Lead Oar is to be ground in a Mill, and so are they to be commixt, and by little and little thrown with a Shovel upon the Coals in the Furnace, serving to make Ashes, and which has Pipes or Chimnyes fitted thereunto to receive the fume and the ascending Flores. That molten part of Metal and Salt which falls through the Grate is to be again taken up with your Shovel, and cast in upon the Coals untill the whole Metal, or all that metallick Vein shall be turned into Ashes. Then farther, all the burnt matter, is to be freed by divers washings from all the defilements, and the remaining Ashes of the Metal or Metallick Vein, is to be reduced into a Metal in a Furnace which the *Germans* call *Stichofen*. These incinerations and reductions are to be so often and so long repeated, untill you find (by making trial with some little piece) that your Lead is now fitted to be handled or wrought on in the Hearths or Furnaces by the Fire of Separation. For then in the Hearths or Tests it is changed into Litharge, whereby it may the

more commodiously yield forth the Gold and Silver, which by the Fire and Salt are therein maturated.

N. B. But you are here to observe that the leaden Oars can indeed be commixed with the Salt, and so thrown in upon the Coals: But now Lead admits not of being so dealt withall, for it is not mixable with the Salt, and therefore it requires that the Salt be first cast in upon the Coals, and then must it be thrown in afterwards at top of it. And this way is to be observed and so often repeated and so long, always throwing in, first the Salt then the Lead, till the Lead being turned into ashes, hath wholly lost its metallick Fusion. The said ashes are to be washt with Water and reduced in the Furnace, on such wise as we spake of but now.

N. B. Other lesser Metals may be added to the Lead or to the leaden Vein or Oar, and so be reduced into Ashes together, as Tin, Iron or Copper. But yet these leaden Oars are more advantageous and profitable if they are taken alone, as being more fit for this kind of labour, seeing they have already in them Iron and Copper, and yield not any good and vendible Lead, by reason of their wild nature, and so there's no need of burning up Copper and Tin which are already vendible.

N. B. Whilest this Incineration is done, many Metallick Flores does ascend up into the Receptacles appointed for the fume to go up in, and which are adjoyned to the Furnace, which (if need be) may be taken out, and by washings be freed from the Salt which ascended together with them, and by Reduction be restored or reduced to their former body: and will yield Lead which contains in it Silver, and is to be converted into Litharge like other Lead, that the Silver may be separated therefrom.

This likewise is heedfully to be observed in the other *Minera's* or Oars turned into Ashes, that afore their Reduction, they be thoroughly washt from all the Salt, and the light filths or defilements are to be well separated from the metalline body; for if this be neglected, the Salt being forced with the strong blast of the Bellows would carry off the Metal together with it self, and the Ashes of the Coals would hinder the Fusion of the Metal it self, and reduce the same into *Scoria's*.

As concerning the Reduction it self, this is well to be regarded, that the Fire must be kindled in the Furnace at least two hours afore the Ashes of the Oars that are to be reduced, are to be put in, that so the Furnace may be thoroughly bright-hot within; for if it be not through fiery-hot, the Cast in *Minera's* melt not, and being not molten they lie in the Fire, and hinder the blast of the Bellows, and spoil the Operation it self.

These labours therefore require a skilfull Artificer, and one versed in such Operations, for they are not so very Facile as they seem to many, to appear to be.

Then farther, this is likewise to be noted, that if the *Minera's* or Oars that you take to this Operation are full of Sulphur, and that that Sulphur is not wholly taken away by torrifying [or calcining them] it will by its fierceness reduce in the melting the body of the good Metal into *Scoria's*, and instead of Metal present you with Dross. And this is that Incineration and Reduction which I have showed in my Laboratory, both to Friends and Enemies; But yet I have (since that time) found out a far easier way of doing this labour, by the help of which, one Man will do more in one day, than he could otherwise in eight days. But because this way is not as yet made

common, it seems not convenient in my Opinion to divulge it here; for as much as I have determined with my self in this present Appendix to disclose onely those things which I exposed to be seen in my Laboratory by others.

By what means Gold, Silver, yea and Copper too, may with great profit be extracted out of the poor Metallick Veins by the moist way, and which cannot quit the costs of doing it by Fire.

First of all, the metallick Earths are to be made red hot, and to be quenched in cold Water, that so being made brittle they may be ground in a Mill. If Sulphur be admixt in them, then must they by a foregoing fireing be freed from the same, because the Sulphur hinders the *Aqua Fortis*, from duely dissolving those Oars. Being now thus prepared, they are to be put into the stronger Glasses, or into Earthen Cucurbits made of the best Clay, and the following Water is to be poured upon them, and is to cover them over three fingers breadth. The Cucurbit being filled with these matters is to be set in a Case [or Pot] full of Sand, and prepared for this use, and all the Water is to be drawn therefrom by Distillation: which is not onely all of it again recovered, but withall doth get it self an encrease or augmentation from the Salt-peter or the Salt, so that there ascends more Water by Distillation than was poured on.

The Oars are to be taken out of the Cucurbit, (or Cucurbits, if there were more Pots used) and being taken forth you must pour common Water thereupon to extract the remaining Salt thereout of, in the which Salt is found the Gold and the Silver that was in the Oars.

N. B. This is to be observed in this labour, that all

the Spirits are not to be drawn off from the Oars even to the dry Salt; and this not onely to shun the dammage that might happen by breaking the Glasses, but also for this reason, *viz.* that there may be left behind with the Salt a little Acrimony, because of some Salts which easily pass into Salt-peter when some *Aqua Fortis* is drawn off them. And albeit that *Aqua Fortis* will easily turn the whole Body of Kitchin Salt into Salt-peter, yet notwithstanding 'mongst all the Salts one Salt admits of a speedier, another of a slow Transmutation, according as it is more or less akin in its nature unto Salt-peter.

And therefore to prevent this errour, some humidity is to be left with the Oars. For when all the Spirits are drawn off, and the Salt is turned into Salt-peter, the Water would not be sharp enough to hold up the Gold that is extracted, when the Solution is made, for the Water would dissolve barely the Salt-peter, and leave the Gold remaining behind with the Oar.

If this errour should chance to be committed, the Salt-peter is to be extracted out of the Oars with the Water, and more new Salt must be poured on upon the same Oars together with the *Aqua Regis* that was drawn off by Distillation; that so this *Aqua Regis* having been once abstracted may not afterwards transmute all the Salt thereto added into Salt-peter. For by how much the oftner the *Aqua Fortis* is drawn off from the Salt, so much the less is the Salt turned by it into Salt-peter, and at length, it will come to such a pass as to remain just as it was afore the abstraction [of the so oft drawn off Spirit.] For this is the nature of *Aqua Fortis*, *viz.* to transmute half its weight of Salt into Salt-peter at the first time; the

second time it transmutes but a fourth part; the third time much less; and at length will transmute none at all; but puts on the nature of Spirit of Salt; which notwithstanding is most fit to extract Gold and Copper withall out of the Oars *in infinitum*, if Salt be thereto added, out of which, it is wont to get it self a perpetual encrease (and be) like other Spirit of Salt.

Now then, to prevent this inconvenience, the *Aqua Fortis* may be left off for altogether, and those Minerals and Metallick Earths may be extracted with the Spirit of Salt onely, and Salt added thereunto: onely observing this thing in the Distillation, *viz.* that some of the humidity be left behind with the Oars whereby they may be the easilier taken out of the Glasses.

Moreover this is to be likewise known, that Gold, Silver, and Copper may be extracted out of their Oars or Earths even without *Aqua Fortis* or Spirit of Salt, if onely Salt or Salt-peter be but added. For if some Oil of Vitriol or of Sulphur be poured upon the Water of Salt-peter, or that the Water of Salt be acuated therewithall, it becomes strong enough to extract Gold, and after the extraction and distilling the Phlegm off, there follows by distilling a pleasant Spirit of Salt, or from Salt-peter a good *Aqua Fortis*. This labour therefore is more gainfull and less troublesome, than if *Aqua Fortis* or Spirit of Salt were used thereunto.

There are other easier and more compendious ways of extracting Gold, Silver and Copper out of their Earths, which, seeing they have not been as yet shown in my Laboratory, I shall silently pass them by at present and that not without reason. But yet there is frequent mention made of the like [Operations] in my first Century, in which he who has an earnest

desire to know more of those kind of ways, may make enquiry.

The Preparation of sutable and proper Waters to extract Gold, Silver and Copper out of poor Oars.

Take of Salt-peter one part, of common *Aqua Fortis* two parts; these being joyned together, extract Silver and also Copper. But to extract Gold out of its Oars or Minerals, there must be taken one part of common Salt, and four parts of *Aqua Fortis*. One pound of Salt, and four of *Aqua Fortis*, make four pounds and ½ of *Aqua Regia*, the other half pound of Salt stays behind with the Metallick Veins or Oars in the bottom of the Cucurbit, and contains the Gold that was in them, and is to be extracted with common Water.

The way of getting out the Gold and Silver out of the washt-out Salts by precipitation, and of reducing them to their peculiar bodies without detriment or loss.

If it be Water of Salt-peter and hath Silver in it, the Water of Salt being poured in, precipitates the Silver to the bottom. But if Water of Salt, and has Gold in it, the Gold is precipitated by pouring on a *Lixivium* which hath in it a little liquour of Flints. And now this Water it self thus mixt by pouring (other precipitating liquors on it) yields (by decoction) most excellent Salt-peter. And the *Aqua Fortis* and *Aqua Regis*, which ascended by Distillation, are fit to make new extractions of Gold, Silver, and Copper out of their Earths; and by iterated extractions (by the Salts and Waters thereto added) do they get a perpetual encrease, insomuch that in these extractions of Gold, Silver, and Copper, there are not required at all any other expences save those few, bestowed on firing.

Therefore in the beginning of this Work there is not required ought else but one onely pound of *Aqua Fortis*, because in the progress of the Work it proceeds on to an infinite encrease, yea, enough for the extraction of many thousands of pounds.

(Hence is it that this Work is an unheard of Operation, and doth almost exceed all belief, and from which there must an immense gain of necessity accrew, because Gold, Silver, and Copper may by this means be extracted out of their poor Metallick Earths without costs.

There remains yet one thing which is to be heedfully regarded in the precipitation of the Gold and Silver. A common *Lixivium* cannot precipitate all the Gold out of the *Aqua Regis*, and therefore I bid you add to the *Lixivium* some liquor of Flints, and this will also appear in my first Century.

Therefore it behoves every one, clearly to see whether or no he makes use of true and genuine Liquor of Flints in his Operation, that so he may not instead of it, use a bare simple *Lixivium* onely, and so commit a great errour, as it hath happened to some as I have been told.

But he that can't make true and good liquor of Flints, or else has it not at hand, may substitute in its steed, common Spirit of Urine prepared in a Copper still, which together with the said liquor precipitates all the Gold out of the *Aqua Regis*.

N. B. But this Gold thus precipitated by Spirit of Urine, fulminates like Gun-powder, unless it be burnt with common Brimstone afore the Reduction, and that this fulminating faculty be taken away from it, which inconvenience the liquour of Flints is not wont to bring.

N. B. If there should be much Zink, Iron, or *Lapis Calaminaris* in the Oars of Gold or Silver, the *Aqua Fortis* or *Aqua Regis* would not all ascend by the Distillation, nor get increase; but some part thereof would stay with those Metallick Earths, and with the *Lapis Calaminaris*, *&c.* and by adhering thereunto be concentrated: but yet there would not be any loss by that, for by the pouring on a Lixivium of Wood-ashes, may it be turned into good Salt-peter, of as much value as may easily recompence the charges of the *Aq. Fortis*, or *Aq. Regia*.

Besides, you are likewise to observe this, that if there should be Copper admixt in the Oars of the Gold and Silver, the *Aq. Fortis* would extract the Copper too, as well as the Silver.

But now the nearest way of separating these two Metals from each other, is this, Let Spirit of Salt be poured to the *Aq. Fortis*, and it will precipitate all the Silver out of the *Aq. Fortis*, down to the bottom and the Copper will be left in the water; which if you put some Iron into, it will stick to the Iron, and by this means be gotten out of the water.

This water now, after the Metals are withdrawn from it, is fit to make new Salt-peter with, and by addition of Vitriol to yield a new *Aq. Fortis* by distillation.

Alkali Salts do in the Fusing bring the precipitated Silver to its former body, which otherwise is very fugacious.

The Copper is turned into excellent Verdigrease. And so the Oars of Copper, though never so poor, may be extracted, and that with no small benefit: Because the Verdigrease made of the bare Copper is twice the price of the molten Copper it self.

The manner of making good Salt-peter in plenty, out of Kitchin-Salt and Calx-vive.

Take the Stones of Lime, which have been thorowly changed or reduced into Powder by the Air, four parts: of Kitchin Salt, or Common Salt, one part, [by weight, and not by measure] whether pure or impure [it matters not:] and of this mixture is a thickish paste to be made by moistning it with Urine, or, in want of that, with Water; which is to be made up into a Pile with Wood, and so may it be made *Stratum super stratum*, of what bigness you please: and it may be done in a Furnace made for that purpose, or else in the open Field abroad in the Air. But you must beware in the building up of this Pile, that the mass of Salt and *Calx-vive* be not too thick laid, and too much; but it would be better to make it up in balls or pellets, that so they may be well fired by the flame, which must penetrate everywhere through the pervious heap or pile: which cannot be, if the mass be spread too broad, and so stop up the passages of the flame.

The heap being made as big as you are minded to have it, the fire must be put under, and so long fed, till all the wood is burnt, and the balls themselves have been red-hot, a whole hour at least: that the Acrimony of the Salt may in so great a heat be changed by the *Calx-vive*, and get it self a milder nature, and consequently be so much the easier transmuted into Salt-peter.

N. B. The Salt that is on this wise transmuted, is most fit for dunging Lands, and to be used instead of the common beasts dung, as I have at large taught long ago in many places of my Writings.

This is the preparation of turning Salt into Salt-

peter, which Artifice, if any be minded to work about, it is necessary for him to order his Operation this following way.

The manner of making Salt-peter out of this prepared Salt.

First of all, this introverted Salt must be exposed to the open Air, and beams of the Sun; but yet so, as that the heap may not be moistned by the Rain, and it must lie in its heap the heighth of some three or four Feet; the which heap is to be wetted either with Man's piss or Beasts; or if there be not enough of this to be had, then with bare water onely, that so the pellets or balls lying quietly for some days, may be dissolved and be mixed with the rest of the matter.

Now when the warm Air hath consumed all the humidity, and dried up the heap, the aforesaid moistning is to be repeated; which being again consumed, and the heap dried, the labour of repeated moistnings and exsiccations is to be so long continued, as long as necessity requireth: For in long progress of time is the Salt-peter generated, which must be washed out with water, and by decoction be reduced into Stria's or Crystals.

This generation of Salt-peter proceeds indeed slowly on, but yet it brings a great profit. For if once the Salt-peter be but generated in such an heap of Salt, and the reliques left after the washing out of the Peter be again put to the same heap, there will new Salt-peter be generated in process of time: so that new Salt-peter will every year offer it self to be washt out of the heap: and this work may be continued without end.

But he that would have some Salt-peter from this

inverted Salt in a shorter tract of time, let him know, that the Seed or Ferment of Salt-peter must be added unto the said heap, that so this same Seed may get augmentation from the Salt, and encrease and grow, like as an herb is wont to grow in a fat and saline Earth. For all things have their Seeds, and doe draw their Encrease out of other Salts. The Seed of Salt-peter is volatile, as is its acid Spirit: its Root is fixed Niter; which being implanted in all sharp Salts, doth beget Salt-peter in a most plentifull manner, and such as is very good, or even better than that which ariseth out of those acid Salts and Alcalies.

We doe not here show this propagation of fix Salt-peter by acid Salts, because it is described in the following Labour and Operation.

Therefore like as any Vegetable may be propagated and multiplied not onely by the help of its Seed, but even of its Root too; Even just so is it with Salt-peter, for it admits of propagation and multiplication by the means both of its Seed and of its Root, as other Herbs doe.

As concerning the Seed of Salt-peter, it is very easily preparable by those who deal in metallick separations and extractions by the moist way. For if Gold be separated from Silver by *Aq. Fortis*; or that Gold and Silver be by it extracted out of their Oars, this very operation hath already abundantly recompenced the charges laid out thereon, and so it offers it self without any costs, and as it were *Gratis*.

And now, if I pour this water on, instead of common Water, upon the inverted Salt, it does not onely become good Salt-peter, but doth also yield (as being the Seed of true Salt-peter) an hundred fold encrease, after the manner of the Seed of all Vegetables, and doth the same as they do. And by

how much the more of this Nitrous Seed is sown in the Earth, so much the more Salt-peter, and so much the sooner too is generated. For when a Gardener doth sow his Seed sparingly, he must necessarily have but a thin harvest: and so on the contrary is it to be understood of a plentifull harvest. And if now there should be any one that should upbraid the Gardener with the slowness of his Seed, because it produceth not Buds, nor Stalks, nor Flowers, nor Fruits in a few days space, would not he say that he cannot compell nature, for it reserves to it self its due time, and its natural course?

The very same would I have you understand here concerning Salt-peter: if haply my Enemies, those most ignorant Sheepsheads, would object against me, that seeing the Salt-peter doth not presently, in a few days, grow or spring forth from its seed sown, therefore that seed was nor true nor good, or that it is altogether impossible that Salt-peter should be generated so plenteously out of Common Salt: I answer such, as the Gardener does, 'Tis necessary to allow Nature her own appointed time.

But that it may evidently appear, that this my planting of Salt-peter, and that this augmentation may be far more evidently demonstrated, than that of any Vegetable seed; the business may be tried for confirmation sake in a small Experiment, afore you set about a more laborious and prolix exercise, and to prevent your fears of attempting it in vain.

Take the Salt prepared with the *Calx-vive* three pound, and put each a-part in several Earthen Vessels. Take likewise of the Water of Salt-peter already used (as being the Seed of Salt-peter) one ounce, two ounces, and four ounces: with the one ounce of that *Aq. Fortis* commix as much Common

water as may serve to moisten one pound of the aforesaid inverted Salt: Then to the two ounces of the same *Aq. Fortis*, adjoyn likewise as much water as may serve to moisten the other pound of Salt with: And so doe with the other four ounces, and therewithall moisten the third pound: Set those three Pots, containing the three several pounds of the said prepared Salt, at the heat of the Sun, but so, as that the Rain may not come, and wash off all the Salt. All the moisture being consumed by the Solar heat, moisten your matters in your pots with Rain water onely, so often, as the drying needs the watering it. When two or three months are over, take out each pound separately by washing it out of the matters in each pot, and you shall find a vast difference, and shall see that that one pound of Salt which had those four ounces of Nitrous seed in it will be all transmuted into Salt-peter, save a few feces: but that pound which had two ounces of the said Seed poured upon it, will contain a lesser portion of Salt-peter; and the other which had but one ounce onely will have the least portion. Moreover, if you pour those Salt-waters you washt out, and which are not yet turned into Salt-peter, upon the feces again, and so dry it as afore, and bestow yet other three months on these exsiccations and moistnings, and then again boil the Salt-peter out of the Salt, it will be much encreased and bettered; and so you will have so much the greater encrease of Salt, by how much the longer you shall have prosecuted this Labour. Such Experiments doe demonstrate, that by how much the more Seed there is sown in a fat and salt Earth, so much the more plentifull encrease of the Seed is to be expected.

But those deriding mockers and persecutors of Art and Truth may here object and say, that the Salt-

peter ariseth from the Salt-peter water onely that was put thereunto, and not from the Salt it self? But I answer, That that used *Aq. Fortis* is indeed the Seed of Salt-peter, but can never recover the Nature of Salt-peter without the help of some fix body: Like as the Seed of an herb cannot become an herb, unless it be cast into a moist and salt Earth, from thence doth it get its body, and so is encreased.

Verily I willingly confess, that the Spirit of Nitre may be reduced to the former nature of Salt peter, by assuming it self a body out of all the fix Salts. But yet, as far as I have hitherto known, by my manifold inquiries and investigations a long time, I could not find any other Salt (save the following) by the help of which, those Waters used about metalline Washings, may be sooner and better transmuted into Salt-peter, like as this, and the following Salts doe: And therefore I doe commend it as of the best rank for the making of Salt-peter. The manner of preparing good salt Nitre out of the extracted Oars is already revealed in the first Century, and therefore needs no superfluous repetition here.

Another Preparation of Salt for the making of Salt-peter.

Take Common Salt one part, and of a sulphureous Oar, which the *Germans* call *Schewelkies*, two or three parts, if they contain less Sulphur: But if they have Vitriol in them too, then must you take equal parts of both. Grind the sulphureous Mineral in a Mill, mix it with the Salt, and heat it red-hot by well torrifying or calcining them for two hours (in Furnaces serving for such a work,) either upon a Grate, or else without a Grate, upon Hearths; that so, during this Candefaction, the Sulphur may have ingress into the Salt, and may alter it. This Salt being washt out of

the sulphureous Minera with water, and boiled till a skin gathers at top of the water, it shoots into long Stria's or Crystals, like Salt-peter, and tasts like it, but falls into Powder in a warmish Air. If it be burnt and prepared by putting *Calx-vive* thereto, after the way afore going, it is convertible into good Salt-peter, but sooner and in a shorter time. If the Minera's you use have Copper in them, or any other Metal, yet nevertheless may they be gotten out thence by fusion, for there will be nothing lost in this operation but the Sulphur; and this must have been driven away by burning it, however, if you would have any of the Metal out of the Minera.

N. B. The *Caput mortuum* out of which the Spirit of Salt by the addition of the Vitriol is extracted, yields such a like Salt, and very fit to make Salt-peter withall. There are also several other ways, which yield no small plenty of such Salts, and that in a manner without any costs, especially if the help of Stone-coals be thereto used. Besides too; this you are to be advised of, that (seeing the Salt is to be burnt with the *Calx-vive*) one Calx is better than another, for some Lime stones are more apt for the making of Salt-peter, but primarily those, which when you touch your tongue with, doe yield a fiery tast; with which sort, the Lime made of Sea-shells doth not compare as to goodness.

By what means the Root of Salt-peter is to be implanted in acid Salts, so as to be thereby augmented, like at the Root of a Vegetable, being transplanted, gets an increase from the saltness of the Earth.

Even as we have demonstrated in the foregoing discourse, that the acid Spirit of Nitre is the seed of

Salt-peter, and doth encrease it self out of *Alkali* Salts like as an Herb doth out of the Earth: Even so by the same reason, fix Salt-peter, which is the root of Salt-peter, admits of transplantation, yet not by fixed Salts, like as the sharp Spirit does, but by sharp Salts, whereto it is to be united by implantation: For, two Acidities, and two Alkalies, cannot produce any new Essence, but two Contraries doe always produce a third. The acid Salt, which is of the meanest acidity, and which doth easiliest admit of being transmuted into Salt-peter, is the common Kitchin-Salt, which we taught the way but even now of inverting by the Minera's of Sulphur. And if that such provision cannot be had to prepare it by, the very Kitchin-salt it self being taken both in the moist and in the dry way, would perform the same, as I have already shown in other places of my Writings. And as for the making of fix Nitre, you may meet with the way of doing that too and agen in my other Writings, and especially in that place where I have treated of the dry separation of washing of Metals, *viz.* when sulphureous and Antimonial Metals are washed by Nitre.

The way of preparing Spirit of Salt, necessary for the Extracting of Gold and Copper out of their Oars; as likewise of making good Salt-peter of the matter left after the distillation is finished.

Mix with two parts of Vitriol or Allum, one part of Kitchin-salt, and throw in this mixture upon hot burning Coals, the Spirits of which are to be taken in great Leaden Cisterns instead of Receivers. This operation (besides the salt Spirit it gives) yields also sharp Flores. If any shall provide himself with double Leaden Cisterns, and shall make the Outer one to hold in it the lesser Cistern, and so fill this outer one

with cold water, he shall obtain more plenty of Spirits by reason of this better refrigeration. But such Cisterns requires a great deal of Lead; for verily even those three alone which I had in my Laboratory contained a thousand and forty pounds of sheet Lead.

There may be other kinds of Receivers applied to this use, which, to reckon up, would be too tedious in this Book.

The matter remaining after the Distillation may be ground in a Mill, and one part thereof mixt with two parts of *Calx-vive*; and so balls are to be made thereof, and to be put upon wood and burnt, as we shewed afore, that so they may be transmuted into Salt-peter.

But besides all these, there hath been a far better and more compendious incineration, and bettering of the lesser and more perfect Metals shown and demonstrated to my friends, in my Laboratory, which requires not so many Circumstances and Labours, as the foregoing more prolix operation, which is performed by throwing Common Salt upon the Coals, does: For it is to be done in a peculiar Furnace, and with purer Salts; and being wrought about a greater work, yields very considerable profit: so that it impregnates Silver and Lead with Gold, with twenty four hours easie labour, and renders them worth the labour of separation.

In like manner, Copper may by the help of such Labours be very much amended, and gets no small portion of Silver, if it be added: so that with a little fire and a very few expences, every sort of Copper, though it has endured the fire scarce twenty four hours, is wont to be so much bettered, as to shew in the Touchstone the marks of two, three, and

sometimes six Lots, according as it has been diligently and circumspectly handled. Hence comes it to pass, that by vile and every-where obvious Subjects any Silver and Lead may be maturated by little and little into Gold, and so may Copper it self be ripened without any detriment into good Silver, by a few repeated Labours. Now these operations requiring but small costs, and but a few labours to accomplish it, may be exercised without intermission, and bring vast profit. These inventions are such as never were as yet thought on by any, and so never at any time saw the Light. But now they that saw and learned, in my Laboratory, the great incineration, did not all of them see this Labour and Artifice, and apprehend its use, but such of them onely that stayed out constant, even to the end of the whole Demonstration in my Laboratory. And as for such as too soon forsook their Master and the School, they are (and indeed very deservedly) altogether ignorant of this operation. For should they have been masters of this *Arcanum* too, they would verily have detrimented me more, which God of his mercy prevented, and hereby provided, that all [my Arcana's] should not fall altogether into mine Enemies hands. The Furnace which I used about the said Incineration and Melioration of Metals, is as yet in my Laboratory, and will haply there remain all this *Winter*. But as for mine own part, I have determined with my self to leave off Chymical Labours, communicating them to others, with whom this more compendious bettering of the Metals will be yet longer to be seen. Therefore all the whole Drove of my Enemies, though never so big, will not at all be able to oppress the truth, what mad attempts soever they make against it. For although one or another of them hath theevishly stole from me

my Secrets, yet presently the Divine goodness hath largely supplied me with others. I have now laid a sure Foundation in Alchymy, and have kindled a Light for both Friends and Enemies, which will very hardly be extinguisht as long as the World endures.

But now, that some little knowledge may be had of this more compendious Incineration, and bettering of Metals, *viz.* of Iron, Copper, Tin and Lead into Silver, and of *Lune* into Gold; I say that it is to be done in a twofold manner. The first is, when the Metals are destroyed either with common, or else with prepared and moist Chymical Fires, and converted out of their own Metallick being into an Earthy nature and Essence, are imbibed with spiritual Salts, and burnt by a close Cementation, so as by their mutual efficacy and actings upon each other, to amend themselves, and afterwards by reduction and separation to yield forth Silver and Gold with profit. And this Labour admits of being exercised in as great a quantity and plenty as any one pleaseth, and is clearly void of tedious troublesomeness, and great expences, for one onely person may discharge this Operation in one onely Chimny, and that with no small quantity of matter too. Nay more, (and which is of greater moment) if any one shall in this operation make use of such Salts as they call Graduating Salts, which are easie to be got, and cost almost nothing, he will get far greater profit, especially if he shall put Copper-plates to be burnt with the Metals reduced by the said Cementation into ashes which said Plates, those Graduating Spirits will penetrate wholly and throughout, and in this penetration, better them, and bring them unto a more noble degree, so as to give on the Test, Silver impregnated with Gold. Nor is it necessary that those Copper-plates be separated by Lead in the secret Pot,

so to get the Gold and Silver made in them, by the said operation, though they have already gotten a meanly-white Colour. 'Tis better and more profitable to put them yet again in some new Cementations, and urge them more with the violence of the Fire, and they will be enriched with a greater access of Gold and silver, then afterwards are they to be Separated by adding a due [quantity of] Lead, which is [thus] done, when the Lead containing the Gold and Silver, together with the Copper, are melted together into a great Cake, these are to be put in the Furnace, which the *Germans* call *Seigerofen*, that so the Lead melting may flow down, and in flowing or running down may carry away with it all the Silver and Gold that was in the Copper. By this Artifice is the Copper conserved, and is to be a new made into Plates, and to be used about new Labours, and be again enriched with Gold and Silver by Cementation.

N. B. There is not at all any need of any peculiar Lead for this Separation of the Copper, forasmuch as that Lead may be used thereabouts which is molten out of the Powders of the Cement, and already contains in it Gold and Silver, which Metals are conserved by one and the same work in the labour of Separation, and are already gotten by the Gradatory Cements out of the Minerals, and the more imperfect Metals.

And this now is my more compendious Incineration and Cementation of the imperfect Metals, to make them better and more perfect. This Operation have I shown to some Friends in my Laboratory, which will moreover be in many places exercised with profit. And now any one may easily foresee and guess, what shame mine Enemies, (who with their Diabolical Clamours and Calumnies, say

my Writings are unprofitable and all over full of Lyes,) must at length be confounded withall, and how basely they have behaved themselves. Nor verily is it to be doubted but that there will be such frequent exercise and so familiar a practice of Alchymy (which is an Art that produceth infinite benefits) throughout all *Europe*, that even abundance of Work-men [or Trades men] will leave their Trades, and many Countrey-men leave their Plows, and set themselves about Alchymy, and by the Assistance of my Writings get themselves Food and Rayment in an easier and pleasanter way, even out of the contemptible Sand, and abject Stones. Whereupon it will of necessity follow, that in all those places where now poverty is rife, plenty of Gold and Silver will again come in sight. These are new fruits which God bestoweth in this Age. And every one that gets so far as to obtain their fruits, let him have regard to the poor and needy, and not forget his Benefactours from whom such things proceeded lest he pull upon himself the wrath and anger of God.

Moreover, there were some other *Arcana's* ocularly demonstrated in my Laboratory, during the shewing of those meer prolix secrets, the reckoning up of which here I judge needless. Some of them are of no small concernment, which by the same Sinister or unlucky mishap fell into the hands of mine Enemies, and will without all doubt be by them manifested. For that very reason will I my self reveal some, in my second Century (God permitting) that it may not be concealed from any one, what excellent secrets I have disclosed for the use of mankind.

'Mongst other *Arcana's*, this is none of the meanest, which, [*viz.*] teacheth to extract Copper,

(by Waters of almost no cost or charges, out of poor Oars of Copper which are every where obvious, and are not rich enough to defray the charges necessary for a melting Fire,) and bring it to use, and that in great quantity, and so easily as that without question the poor Countrey-men that can very hardly sustain themselves, their Wives and Children, will for the time to come set about such an Operation, and get such *Minera's* or Oars, or even the *Scorias* of them, to extract the Copper out of them and sell it, and so provide themselves Food and Rayment against a sharp Winter, whereas otherwise they must live miserably in want and poverty. The Operation it self is this.

How Copper may easily and very profitably be extracted and made corporeal (without any melting or fusion) by a certain Water of very small expences.

There are two sorts of Oars or Veins of Copper met withall, some are mixt with Sulphur, and refuse extracting with *Aqua Fortis*; insomuch that you must first remove the Sulphur from them by rotting as it were and burning them, afore that Salts or sharp Waters can display their virtues upon them. Now that roasting (or calcining) then, is to be done on Hearths by the flame of Wood, on which, that metalline matter broken into Powder, is to be uncessantly stirred with Iron Instruments, so long till it emits no more sulphureous stinch: This done, they admit of extraction with *Aqua Fortis*.

Other *Minera's* or Oars which have no Sulphur admixt with them, need not this calcining, for they are to be onely heated red hot in the Fire and quencht, with Water and so broken to pieces, and

then are they made fit for extraction.

But all sharp Waters which dissolve Copper may be used to extract the Copper out of poor coppery Oars, and that with profit, when the Waters are of no great costs, but are to be had for a very little charges. Such are an *Acetum* or Vinegar of Corn, *Acetum* of Woods, which any Countryman may get easily and in great quantity; also, Water of common Salt, Water of the Lees of Wine, out of which adust Wine (or Brandy) or Spirit of Wine is prepared, and which else are cast away. These two latter are of the meanest price, and may therefore be easiest of all gotten. The Operation it self is this.

The Oars being reduced into Powder must be put into small and low (Copper) Pans, about the thickness of a Span, for if they should lie too thick or compact, they would more hardly be stirred with a wooden Stick: Upon them thus lying in the Pans, pour that acid Water the heighth of a Span or at least a hands breadth above the matters; then put Fire under the Pans, let it boil strongly, and let the matter be uncessantly stirred, that so the Water coming to it in every part, it may extract all the Copper the more easily. When this Water has boiled one or two hours, and so gotten a most green colour, and that it can dissolve no more Copper, it must be poured out, and more put on, and be on such wise boiled so long till it hath gotten the same colour. Now this pouring on is to be repeated with new Water so often and so long till it imbibes (or extracts) no more greenness, which is a sign that all the Copper is extracted out of the Oars.

N. B. If there should be but little Copper in the Oars, the first Water will extract all the Copper, and so there will not need the pouring on any other

Water. Nay more, it sometimes happens that even the first Water would attract more Copper if the Oars had had more of the same. Therefore the Copper is not to be precipitated out of that Water which hath not extracted Copper enough, but is to be reserved and poured upon new Oars, that it may be thoroughly impregnated with Copper, and so the precipitation with Iron may not be used in vain. For by how much the more Copper, the Waters shall be extracted (or held up in them) so much the greater is the gain, and so much the less Water is required to this Work.

It is a thing easie to be understood by him that shall thoroughly search into this Operation, and manage it with due diligence, so as to commit no errour.

N. B. If you have store of these green Waters, put in some old Iron for one or two nights, and you shall get out the Copper that will adhere unto it like filed Copper, and 'twill leave the Water white and clear, which said Water can be used no more about this kind of extraction, but may be poured upon *Calx-vive* mixt with Wood-ashes, and so be dried up, by the Air or the Sun, under some Roof to keep off Rain, and from this used Water, and the *Calx* or Lime is Salt-peter generated in such a manner as I taught afore.

N. B. This Copper which sticks on to the Iron, is to be freed from all the Saltishness by washing it with common Water, and is to be afterwards dried, and so may be used in the stead of pure Copper, for if molten it nothing at all differs therefrom, if the Operation be but well managed. Nay more, it has in it a most notable Commodity, as being more tender and more pure, and more commodious for many Operations than that gross common Copper is. 'Tis

also very fit to be converted into most excellent Virdigreese, if it be moistned with sharp Vinegar and set in the heat.

Moreover I have shown in my publick Laboratory, by what means Spirit of Salt, *Aqua Fortis*, *Aqua Regis*, and my *Sal Mirabilis* may be easily gotten, and that in great quantity too, by a Separatory Sulphur, which is nothing else but Oil of Sulphur or of Vitriol, of which I have very clearly treated in the second part of the *Miraculum Mundi*. Likewise how Gold may in one quarter of an hours space be converted by the *Sal Mirabilis* (in a Crucible) into its first matter; or, into a red, transparent, sulphureous, and soluble Stone, which suffers it self to be dissolved by common Water into a most excellent Medicine. This golden Water being poured to the roots of Herbs, makes them to have a golden property, as concerning this thing you may consult my Treatise of the nature of Salts, and the second part of my *Miraculum Mundi*.

Besides, I have shown to some of my Friends, how in the extraction of Gold and Silver out of the poor Oars a Gradatory and withall fixing Spirit may be received, which is able by graduation to perfect (or exalt) any *Argent-vive* into Gold and Silver, according as the extraction has been made either of Gold or Silver Oars.

This so great a secret hath as yet escaped mine enemies hands, and so has that my secret incineration and cementation of Metals, of which they would likewise have been Masters had they waited but yet two or three days longer; for I presently showed such Operations to those that stayed, and unto other honest Spectators.

To these may be also added that notable *Arcanum* of bringing Lead in one quarter of an hours space to

such a pass, by means of a graduating Fulmen, without almost any costs, as to be so impregnated with Gold as to be worth the separating.

These and such like *Arcana's* with many most profitable discourses have been seen and heard in my Laboratory, a tedious and needless Repetition of which I willingly omit.

Finally, to mention somewhat by way of addition, 'tis necessary that I say onely thus much, that happily in some short time, the business will so come about that many Men will not for the time to come take on them such a deal of care about the laborious, costly, and uncertain ordering of Mine-pits, but will rather lay hold on and manage (and that with greater profit) such as can be had and gotten better on the outside of the Earth. But especialy there will not be a few who will set about these Cementations of mine for gains sake, for they have many times many lying idle by them, and which yields them no profit, which by this assisting way they will augment, and without doubt it will be effected too by many.

Verily I cannot at all see (as far as I know) whether there can be found any honester and certainer way of sustaining Life in the whole World, than this true melioration of Metals, which brings with it so great a benefit. For even Merchandise it self though it be so very gainfull, yet doth it stick amidst Sins, as firmly as a Nail does in a Wall.

The Services of Lords and great Men are laborious and full of servitude, which many have experienced. And as for War, that snatcheth away abundance of Men by an immature death.

Far better therefore is it to live quietly with one's Family in some poor Cottage, and to feed on a piece

of Bread, than to hunt after uncertain Riches by most great dangers. Therefore I doubt not but there will be many found for time to come, who being holpen by my Writings, will more commodiously sustain themselves together with their Wives and Children, than hath been hitherto done. Nor do I at all doubt, but that many will take it very untowardly, that I have so manifestly and so perspicuously revealed all things. For this is often done and daily is it, that I am upon that account reprehended by others, as the following Letter may witness, the like of which I could have here added more had I so listed.

There is no Body can satisfie all. Even *Jupiter* is not the same (or alike acceptable) to all: One is troubled with hear, another is burdened with cold. What things soever I have written, they are clear and evident to such as are skilfull in the Art, and have understanding in the business, and therefore they had rather I had written more darkly. But the unskilfull and ignorant do judge that I have plaid the Sophister in Writing, because they hit not the mark.

But all their judgments and Censures mought be tolerated whatever they be that they pass upon my Writings, did they not by reason of their ignorance, contemn the good things themselves, and say of such things as are most true, that they are Fallacies and Lies: but this needs not seem strange to any, forasmuch as such wicked contemnings proceed from those that by reason of ignorance and blockishness do no better understand the business. But this is plainly diabolical, to be highly benefited by any one, and to be made partaker of such great secrets, and yet afterwards impudently to deny the same and say, that they never had any good thing conferred upon them. The detestable malice and impiety of these

Men hath enforced me to manifest in this Appendix, so many excellent secrets, which I would at no time have laid open, had I not been so treacherously deceived by those perfidious Men.

This is the Letter written unto me, of which I made some mention even now.

"Thou hast written too clearly, and again too manifestly; beware lest God stir not up against thee another new Farnerian Devil, to punish thy easiness [or forwardness] of publishing such Mysteries. For they are not to be profaned by the ungodly, let not the present corruption of Men deceive thee, and that blindness [of theirs] which for the most part ariseth therefrom; for all wicked Men are not blind, I know many Farners that are defiled with all kinds of Evil, and yet are not all of them so blinded as thy Farner is. Nay, their Wit is so penetrative and so clear-sighted, that should they but read the divine Books that thou hast published there would not be a secret in all nature, but they would know it; nay more, they would in a short time perfect that Philosophick Work. Which should it so come to pass, (the more's the grief) what a many Slaughters, what Whoredoms, how many ruinings! And what evils of all sorts would break in upon mankind; of the which, thou thy self (though innocent) would'st be the cause. I know that the detestable Calumnies of the impious Farner enforced thee to publish them, for he every where reported and to all, that thou wert ignorant of them. But my most dear Sir, what is your knowledge as a thing of

nothing, unless another likewise knows that you know it? God knows that thou knowest, for he gave thee thy knowledge. Thine own conscience also knows it. What? Cannot these two most plenarily bless or make a Wise Man happy? The pleasure that depends on the Opinion of Men is unhappy. In vain do we seek after true Felicity without us, if so be its solid principle or foundation should be within us. What matters it, if Men think thee to be less learned than thou art, as long as the very light it self of nature shines unto thee? I would to God that I could once accomplish that, which, by thy divine Books it is most certainly manifest unto me, thou hast perfected, and let all Men believe me to be a most stupid Fellow; I wish not thus, as if I did at all doubt of the truth of any Work. For though I should have perfected the whole work an hundred times, I could scarce be more certain of the truth thereof [than now.] He that knows the way of concentrating Fire, and of uniting the terrestrial Sun to this concentrated Fire, and the *Arcana's* of Fermentations doubts not, nor seeks after any thing more. I may boldly say, that seeing nature doth perform whatever she has a mind unto, by these three, it must necessarily be, that it should do some most eminent thing. But if I could but once have finished the Work it self amidst those thousand of businesses that have hitherto withheld me, and kept me off from the Operation, I should have been long ago able to wind my self out of the intricacies of this present Age, and wholly

> devoted my self unto God, and to the most holy Philosophy. I beseech thee therefore my [dear] Master, and entreat thee by God and by the most laudable charity thou owest thy Neighbours, to write more obscurely for the time to come, nay, and if it may be, to wrap over the Books thou hast already published with some new cloudings, lest that celestial treasure fall into the hands of the unworthy, and so become hurtfull to pious Men. Pardon Sir the liberty of my complaint, for there is no other cause thereof save piety to God, and a Zeal to the most Learned, most upright Man, and one that too well deserves from ungratefull mankind. And albeit thou knowest not me, yet canst thou not be unknown to the Curious, seeing thou hast Written such wonderfull things. Nor can there be any one that shall but once have read over thy Books, but he will be highly obliged unto thee, if he has but any light of Justice [or Righteousness] remaining in him, *&c.*"

Many such like Letters as these, have been ofttimes sent me from learned and skilfull Men, tending to this end, to warn me not to publish such excellent secrets for the time to come. Yet nevertheless, amongst those that are rendred partaker of such, there are some who (although the Operation it self has been sometimes manually showed them very perspicuously and clearly,) are notwithstanding so sottish and ignorant, as that they cannot imitate the aforeshown Operation. But some there are also that are come to such an heighth of Treachery, as that (being either seduced by their own false malice, or

drawn away with the desire of profit,) they deny even the truth, certainty and stability of that very thing themselves have manually experienced, and dare to say it is false, this verily is an astonishing and detestably malicious wickedness, and justly and deservedly gives every one an occasion to shun such devilish Men more than a Dog or Snake.

I *Glauber* may justly and deservedly be compared with a burning Candle, by serving others, am I consumed; have not I by the publishing such very excellent Writings kindled a clear and new light to the whole World, and added and consumed mine own peculiar Oil, and that in vain too, as reaping no recompence proceeding from a gratefull mind?

An Explanation of some obscure places which are to be met withall in the Third and Fourth Part of the Prosperity of Germany*, and in the first Century.*

In the Third Part of the Prosperity of *Germany*.

In the Operation which teacheth to extract Gold and Silver with profit, out of all Oars or Metallick Earths, in Page 360, A. *signifies* Lapis Calaminaris.

Page 361. A. *is once met withall there, and signifies the same* Lapis Calaminaris.

In Page 370, the same Letter A, *once put, signifies the same* Lapis Calaminaris.

In Page 370. b. *where we treat of the Waters used about Washing or Edulcoration, and show their use, the Letter* B. *signifies pieces of Cloth, and the Letter* C. *the shells of Eggs, and all Cockle-shells and Muscle-shells, [or Shell-fish] of all kinds, in the water and out of the water: but the Letter* D. *denotes the Feces or Lees of*

Wine.

In the same Page, the Letter E. *shows or signifies Eggshells, and the Shells of all Shell-fish.*

The Letter F. *signifies Stones and Lime.*

In Page 371. a. *the Letter* G. *signifies Oil of Vitriol.*

In the Fourth Part of the Prosperity of *Germany*.

In Page 397. b. *the Letter* A. *signifies one part, and* B. *three parts.*

In Page 398. a. *by the first* X. *is understood* Alkalies, *and by the other* X. *is meant a fixt Salt, helping on Liquefaction or Fusion.*

Here follow some profitable Operations, and which appertain to the Extraction of Metallick Earths; they are indeed treated of, or published in the first Century; but because of the omitting of some words, they are hard to be understood: which, forasmuch as they comprise the things that primarily concern the Extraction of Gold and Silver, it seemed to me a matter worth the while to insert the same in this Appendix, the which (as I hope) will not be unacceptable to those that search after such great Secrets.

31. *By what means volatile Gold is to be compendiously extracted by the moist way, out of coloured Flints, red Talk, Granates, Sand, Clay, and such-like Oars or Minerals, and made corporeal.*

First of all, such Minerals are to be heated red-hot in the Fire, and be quenched, then ground with Mill-stones, and are to be put in Stone-Pots, or *Waldenburg*-Pots, or *Colein*-Pots, that in them they

may be moistned with pouring *Aqua Regia* thereupon. These Pots you must put Coals about, and heat them well. The Minera's being together with the *Aqua Regia* well heated, there must be poured thereupon so much Common warm water, as will suffice to wash off the *Aqua Regia*. Being on this wise moistned, they are to be put into great Pots made of good Potters Earth, having a many little holes in the bottom, over which is some Cap-paper to be spread, that nothing of the Oars fall out through the holes, but the water onely may distill down. After that all the first water is run out, you must pour on more hot water, and these pourings on are to be so often repeated, till the water tasts on more saltish, for then it has carried off with it the *Aqua Regia* that contained the Gold in it.

N. B. The Pots are to be set upon a Bench or Dresser that hath holes in it, so that the [Waters] may pass through the bottoms by the holes, and Vessels may be set there-under.

N. B. The Minerals may also be put in Barrels, having a double bottom, such as those Barrels are in which they use to wash out the Salt-peter with Common water out of the Earth. And now after the same manner are the pourings on of Common water to be so long continued till there is no more saltishness perceived.

N. B. Albeit that there is no more tast of saltness discernable, yet nevertheless some of the Salt doth as yet abide with them, [*viz.* with the Oars] and which is to be turned into Salt-peter, on this wise following.

32. *How good Salt-peter is to be made with profit even out of these Oars.*

Mix these Minera's that are thus deprived of their Gold with an equal weight of *Calx-vive* and Wood-ashes, then heap them up in a heap under some Shed or Pent-house, and moisten them for half a year, or for an whole year by repeated pourings on, of either Man's piss or Beasts, as often as (after the drying up of the moisture) need requires. In want of Piss you may use Common water. By this means the *Aqua Regia*, which was not thoroughly washt off with the warm water, and so remained behind in the Oars, will, by the assistance of Urine, or even of Rain-water, convert the Salt in the *Calx-vive* into good Salt-peter, which is to be washt off like other Salt-peters, and be reduced into Stria's or Crystals. The remaining matter being freed of the Salt-peter by washing it off, may be again put under the same Shed or Roof, to keep off the Rain, and be exposed to the Air and Solar heat, and be moistned with Urine, and it will in its season again yield Salt-peter, and will even keep doing the same for many following years, if it be dealt withall on the like manner. And so even the very *Aqua Fortis* it self, which remained behind in the Oars, will bring its benefit. The reason of this manner of Salt-peter making is this, because the *Aqua Fortis*, or Spirit of Nitre, is as it were the seed of Salt-peter, and is of this nature, *viz.* when it is put among other Salts, (like as when some Vegetable seed is sown in the Earth,) it augments it self thereby, and is multiplied, even as the Seeds of Herbs are wont to doe. And haply, hence came that old Proverb, of *sowing Salt*, which the unskilfull and ignorant mock at, saying, How can it be possibly done, that Salt should be sown and multiplied, seeing the Rain can dissolve it and wash it away? These foolish ones did not know either what Salt was to be sown, or how. Evident it is, that even this is the

sentence and opinion of the ancient Philosophers, that even Salt may be sown and multiplied in the manner of Vegetables.

N. B. Out of the extracted Oars or Minerals being conjoyned with *Calx-vive* and Wood-ashes, may Salt-peter be made, in a few days space, by moistning the matters with pouring on, even barely Common water, and so drying it up again: but then there will not be such a quantity, as when more continued and more frequent pourings on of Urine have preceded.

N. B. It is likewise a thing possible to be done, to make good Salt-peter even in one days space, with the Waters used about the Edulcoration [or washing of the Oars] if they be poured upon *Calx-vive* so long till all the noise [or tissing ceaseth] which is made in the Solution. And thus out of the sharp water of Salt-peter, and the fix Salt in the *Calx-vive* is presently generated Salt-peter, shooting into long and delicate Crystals, after that the superfluous moisture shall have been thence drawn off in a Copper-pan. The remaining Salt-peter water must be again boiled in a Copper even to the appearance of a thin skin, and then be set in the cold to shoot more Salt-peter; these Labours are you to go on withall untill all the Salt-peter be boil'd out.

I think now that I have written and delivered all things perspicuously and clearly: He that cannot comprehend them, must even let them alone as an Ass must the Harp.

As concerning the sharp Waters which are used about the Extracting of Gold out of the Minerals or Oars, so as the Gold may not be lost that is in them, but be conserved, and that with profit, there are several ways that offer themselves, amongst which we have thought good to produce these following.

33. *The ways of Reducing volatile and fixt Gold unto a body, out of the Edulcorating Waters (so called) with which the Gold aforesaid hath been Extracted out of the Oars; and also of usefully or profitably improving the said already used Waters themselves.*

He that desireth to enter upon the best way, may pour into the Solution of the Gold, or into the Water containing the dissolved Gold, a Solution of Silver or Lead, and in such a quantity as he shall guess the Gold is of, that is dissolved in the Water. As for Example.

Suppose there be two or three Lots [Lotones or half Ounces] of Gold in the water, there must then likewise be dissolved so many Lots of Silver or Lead in *Aqua Fortis*, or thereabouts; which Solution is to be (be it more or less) put to the said water, and to be well mixt by a strong shaking it to and fro, till it becomes like Milk. When it shall have settled, it must be shaken again, and those strong agitations must be several times repeated in an hours space. Then all being well settled, the clear water is to be poured off, and the grosser matter is to be put in a Filter, that so all the humidity may by distillation [or filtration] be removed from the dissolved *Lune*, or dissolved Lead, and the Metals themselves may afterwards by reduction be reduced into their pristine body, by such an help as we will presently teach.

N. B. If the Silver or the Lead should not have extracted all the Gold out of she Water, or drawn it to themselves, which may easily happen, yet notwithstanding there is not any loss of the same. For, because the *Aqua Regia* being debilitated by pouring plenty of water thereupon is rendred unfit to extract any Oar anew, there may be poured into that

edulcorating Water out of which the Gold is already drawn by the Solution of Silver or Lead, a sharp [or strong] *Lixivium* made of Wood-ashes and *Calx-vive*, and rendred a little sharper by a little Liquor of Flints. For the Flints doe precipitate all the Gold out of the Solutions. And now the *Aqua Regia* being kill'd by the *Lixivium*, lets fall every Metal that it has in it, whether it be onely Gold, or Copper, or Iron, in the form of a yellow Powder: This Powder is to be dried, and to be reduced after that manner which I told you but now, that I would teach.

The same Gold may likewise be gotten out of the *Aqua Regia* (first debilitated by Common water) very commodiously by a Solution of Mercury or Quicksilver put thereinto; The Mercury abides in the *Aqua Regia*, and the Gold falls to the bottom like a tender fine Powder, which being washt and made corporeal by reduction will be 24 Carracts fine. And as for getting the Mercury out of the *Aqua Regia*, it is not to be better done than by pouring thereinto a sharp *Lixivium*, by which the Mercury is constrained to fall down to the bottom like a yellow Powder, which is profitable for such-like precipitations. The *Aqua Regia* and the *Lixivium* serve for to make Salt-peter withall.

The Edulcorating-water out of which all the Metals are already reduced [or precipitated] being boil'd in Coppers, till a skin appear at top, and then poured out into other Coppers or wooden Vessels, yield excellent Salt-peter, fit for the distillation of *Aqua Fortis* for a new Operation. He that is skill'd in managing this work, will get as much Salt-peter as will pay the costs of the *Aqua Fortis*; insomuch, that the Gold is extracted without any costs. For five or six pound of *Aqua Fortis*, which holds in it two or

three pound of dissolved Salt, and is precipitated with a sharp *Lixivium* of *Calx-vive* yields about some ten pounds of Salt-peter: and this will certainly answer the price of the Water or *Aqua Fortis*; and so you will have Gold extracted out of the Stones without expence or charges.

34. *Another and better way of getting out the Gold that is Extracted out of the Oars, out of the* Aqua Fortis.

Make, by Calcination, some Ashes, of one part of Tin, and four parts of Lead, and put them in an Iron-pot, whereto pour the extracted Gold, or the *Aqua Fortis* containing the Gold, boil it and continually stir the Calx with an Iron rod, that so all the sharp Spirits may cleave to the Lead and Tin ashes, and the Phlegm onely may exhale. After that the said Calx of the Metals hath concentrated all the Spirits, and is become wholly dry, let it be taken out, and be cast upon Coals in a secret Melting-pot or Crucible, in which operation the fire forceth out all the Spirits into the Recipient, which are to be again made use of for new Extractions. The volatile Gold, and which is mixt with Iron, adheres to the Calx of the Metals, and is to be reduced in the Furnace which the *Germans* call *Stichofen*; whereby the Lead impregnated with the Gold, and exalted by it, is gotten, which by reparation yields the Gold and Silver.

N. B. If that Lead should not contain Gold enough as to be worth the while of separating it on the Cupel [or Test] it is to be again commixt with Tin, and be reduced into Ashes, and by this Calx are new Extractions to be Concentrated, that so by the so many repeated Labours, the Lead is at length made

rich enough, and yields (by separation) a good portion of Gold and Silver.

If (in the separating) the matter be turned by the blast of Bellows into Litharge, it is not needfull to melt such a deal of Lead on the Tests, which would require so much fire. But however, it is a thing feasable for the Gold to be gotten out of [or by] the Tests without melting, which shall be taught afterwards.

35. *How an* Aqua Regia *is easily acquired for the Extraction of Stones.*

Forasmuch as Spirit of Salt may be had in great quantity, you need onely dissolve some Salt-peter therein, and this Solution is to be used to extract the Minerals withall. For the Spirit of Salt being made stronger by the Salt-peter, doth readily and willingly seize upon the tender Gold that is in the Stones. And as for the Spirit of Salt, it may be used as it comes over in the first distillation without any rectification.

36. *An easier way of getting an* Aqua Regia *usefull for extraction.*

Because that these Operations do always bring forth Silver impregnated with Gold, and that *Aqua Fortis* is requisite to make the Separation of them; the Solution of Silver may be used, and so the labour of the aforesaid incineration be omitted. Into the *Aqua Regia* wherewith you have extracted the Gold, pour in a Solution of Silver, and it will fish out the greatest part of the Gold out of the *Aq. Reg.* and is, [*viz.* the *Aq. Reg.*] to be afterwards made use of to a new extraction, and be again divested of its extracted Gold by a Solution of Silver. In want of a Solution of Silver, the extract is to be concentrated with the

Ashes of Lead, and you must proceed (by driving off the Spirit out of the Ashes, and by reducing the same Ashes in a Furnace,) after the same manner as we taught you but now in our foregoing directions.

N. B. You are here to note, that the *Aq. Fort.* which containeth in it the dissolved Silver, and is poured into the *Aq. Reg.* or nitrous Spirit of Salt, doth add an encrease unto these same Waters. For the *Aq. Fort.* doth corroborate the Spirit of Salt far better than Salt-peter doth.

37. *How the Silver (wherewith the Gold has been separated out of the* Aq. Regia*) is to be gotten [or reduced] out of its* Calx.

After that the Solution of the Silver being poured into the *Aqua Regia*, hath extracted the greatest part of the Gold; the *Aqua Regia* is to be poured off clear from the Silver remaining in the bottom, and is to be used about new Extractions. But if so be it should yet contain Iron in it, it must be concentrated by Lead-ashes. The white Calx of Silver is to be put upon some Cloth over a glass or stone Vessel, and so is to be freed from the remaining *Aqua Regia*, which will drop from it; and by pouring on of warm water, it must be altogether rid of the *Aqua Regia*, which as yet adheres thereunto. This done, your Linnen-cloth being strong and three double, the Common water is to be squeezed strongly thereout of, and the Calx it self laid by, to dry; which may afterwards be reduced in the Secret Crucible, or be used about a Cementation of *Lapis Calaminaris* into Gold and Silver.

38. *How the said* Calx *of Silver is to be reduced without any loss of its weight, and without any*

Detriment.

Forasmuch as this white *Calx* of Silver is made so very volatile by the Salts, as that it cannot be reduced at all in the common melting Pots or Crucibles without great Detriment, there is no way of preventing that loss more commodiously than this which follows.

Mix this silvery *Calx* with an equal weight of a *Sal Alkali*, and cast it into the secret red hot Crucible, wider at bottom and narrower at the top, the which you must cover with its Cover made of the Lute of Wisedom. By this means will the *Calx* melt, nor will it lose any thing by fume, nor will it penetrate into the melting Pot or Crucible: and so the Silver impregnated with the Gold will be conserved without hurt, which being granulated the Gold may be separated by *Aq. Fortis*: Now this very Solution of the Silver by the *Aq. Fortis*, may be again used to gather [or separate] more new extracted Gold, and so will afterwards produce the Silver to be reduced the same way we instructed thee, and so give thee a perpetual Separatory Operation of Gold and Silver, which may every where be exercised with a great deal of profit.

39. *Another way teaching to reduce fugacious Silver with greater profit.*

Put upon the Rudder of thy Silvery Ship, the little Fish called *Remora*, that so it may be freed from its speedy flight, and abide quiet. Melt thy said Ship together with the *Remora* that fits on the Rudder in the secret four-square melting Pot, in which melting together, there is not onely recovered all the Silver without any Detriment, but it doth also get an increase of its weight, out of the white Bristles or Fins of the little Fish, and becomes enriched with Gold by its Bloud: so that this Additament yields (in

the Reduction) a greater quantity of better Silver than other Additaments do. But as concerning other Commodities or Benefits that this fugacious Silver bestows, it shall (God willing) be taught afterwards.

Thus much was I willing at present to teach and reveal, concerning the extracting of volatile Gold out of Stones and the poorer Oars, and of a successive graduating of Silver into Gold. There shall be more taught elsewhere.

40. *A gainfull extraction out of the poor Oars or Minera's of Silver and Copper, by the moist way.*

These Minerals or Oars are to be dealt with after the same way as we showed above about the Minera's of Gold, *viz.* they are to be heated red hot, quenched, and ground with Mill-stones and be moistned with *Aqua Fortis*, and to be extracted after the like manner as the Oars or Minera's of Gold are, all the difference being onely in the Waters; for *Aqua Regis* is to be used to extract the Gold with, and *Aqua Fortis* for the extraction of the Silver. If therefore there be the Minera's of Gold and Silver at hand, the Gold is to be extracted by *Aqua Regis*, and the Silver by *Aqua Fortis*; and both the Solutions are to be mixt together, in which mixion the Silver precipitates to the bottom in the *Aqua Regis*, and withall fisheth out the Gold out of the *Aqua Regis*.

Neither is it here any impediment if the Oar of Silver should also contain Copper in it, which will be extracted together with the *Aqua Fortis*. For the Silver and Gold fall down to the bottom, and the Copper abides in the *Aqua Regia*, which is again fit to extract more Gold withall, and may indeed be used as many times as any one shall please. The Copper it self is extracted out of the *Aqua Regis* by Iron Plates,

but they tinge the *Aqua Regis* with a yellow colour, and therefore make it altogether unfit for any farther labours of this kind. Better is it therefore to concentrate it upon the Ashes of Lead, that so that spiritual Iron in the *Aqua Regis*, may convert some of the Lead into Gold by Gradation, and the *Aqua Regis* it self having been so often used may be yet again used.

41. *Another far easier way of plentifully extracting Gold and Silver out of the poor Minera's or Oars, Sand and Clay, and the like Minerals without the Fire of melting.*

Fill a Glass Cucurbit, or one made of the best Earth, and excellently well luted a little more than half full, with the Minera, Sand, or Stones containing in them, fugitive and fix Gold, and hereupon pour as much of the following *Menstruum* as is sufficient to moisten them; then presently put on an Alembick (for assoon as ever the dissolving Water is poured on the Oars or Minera's, it presently works and fumes) and draw off therefrom (in Sand) all the humidity by Distillation: that so in the distilling the Gold it self may be dissolved, and the *Aqua Regis* it self may by Distillation be recovered; which is again profitable for a new Operation, as we shall tell you by and by. All the moisture being drawn off, let the Cucurbit cool in the Sand, and then take it out, and put in some Water, that the Minera's and Salt may be softned. Now extract very carefully and diligently, all the Salt out of the Oar, in which said Salt is the Gold that is extracted out of the Oars or Minera's, and boil it up into a red Salt, to which must be added some Litharge, and so must be molten in such Pots as will not break. The Litharge will imbibe all the Gold, which how it is to be separated from the Lead, we

will presently teach in the following discourse.

42. *The preparation of the Water necessary to this extraction.*

For the extraction of Gold, Salt is to be dissolved in *Aqua Fortis*, and for the extraction of Silver, you must dissolve Salt-peter in *Aqua Fortis*. With these Waters, of which you may furnish your self with plenty without any great labour, moisten the Oars and then distill them off again from the said Oars, and they will be always fit for such like Operations, insomuch that you need never to make new Waters. Nay more, in all the several Operations and Extractions of the Oars, they will be more and more augmented, so that if thou usest but at first no more than two pounds of the same Waters, they may suffice thee for infinite extractions.

N. B. By this means, all the Gold, how little soever, may be extracted by thee out of all Flints, Sand, and other Minerals without any expences, the Fire onely excepted.

This also is expedient for me here to show, that sometimes there are to be found fugacious Minera's of Gold, and coloured Flints which are sufficiently rich with Gold, and are painted as 'twere with delicate colours, *viz.* green, sky-colour, and red: but in the heating them red hot, those colours vanish, and leave the Flints white. Such as these admit not of heating red hot, like as others do, which retain their colours in a red hot Fire. Therefore such must be reduced into Powder without any previous heating red hot, and you must extract them [as they are] that so the volatile Gold may be attracted by the *Aqua Regis*, which said Gold being abstracted [again] by

the Ashes of Lead commits it self to [or imbibes it self in] the said Ashes, which are to be reduced by the help of the secret Crucible; in which Reduction, the Gold becomes corporeal and admits of being separated from the Lead with profit.

N. B. Such Stones may likewise be mixed with the sharp coagulated Spirits, and these [Spirits] may be forced over by a Retort: For so, the fugitive Spirits of the Salts carry over with them the Volatile Gold, and make a very excellent Gradatory-water, transmuting fugitive Mercury into Gold, with greater profit, than if this very volatile Gold had been made Corporeal with Lead.

This secret is none of the least of those which teach the Extraction of Gold out of colour'd Flints or Stones.

Such a volatile Gold may also pass into other Metals by gentle Cementations, and so become fix, and will bring no small profit, nay rather a greater benefit than if it were gotten out by fusion. In such Cementations, the volatile Gold hath time of getting a body with the other Metals, and of acquiring a fixity, and is as it were a golden Seed, which augments it self into Gold, in, or out of the Metallick Earth.

43. *Another Water to Extract Gold and Silver withall.*

For Gold, let Salt; for Silver, let Salt-peter be dissolved in the Water [or *Aqua Fortis*] and let be thereto added as much Oil of Vitriol as half the Salt as you put. This Water extracteth Gold and Silver out of the poor Minera's Sand and Stones, and requireth the same operation as the precedent ones doe. It is likewise augmented even to infinity, insomuch, that

Gold and Silver may be extracted out of the poor Mines without Costs, if you except but the fire.

N. B. Oil of Sulphur does the same that Oil of Vitriol doth, and therefore may it serve instead thereof in such Extractions of Gold and Silver.

44. *Another far easier way of plentifully Extracting Gold and Silver out of the poor Minera's or Oars, with very little or in a manner no Costs at all.*

Mix the Oars or Minera's with their due Waters, and therewithall fill small Pots or Crucibles made of the best Earth, which put near one another in a great Iron pot. Put an Alembick upon the Pot, and draw off the Spirits by distillation, which [Spirits] will requite all thy disbursements, and will so give thee Gold *Gratis*, which you are to wash out of the Oars with Water, and get it [or corporifie] by *Saturn*.

45. *Another yet easier way.*

Moisten the Oars with their due Waters, cast them in by little and little upon the live Coals, and that in such a manner as we taught thee about distilling Spirit of Salt. By this Distillation the Spirits pass into the receiving Vessels, and the Gold and Silver are dissolved and stay behind with the *Sal Mirabilis*, and is to be washt out of the Oars with Water, and to be molten with *Saturn*. Thus is gotten the Gold and Silver that was in the Minera's or Oars, without any expences, and the Spirits quit all the Costs.

46. *How Gold and Silver may plentifully be extracted out of Fat Clay.*

Although that the Extraction of Gold and Silver by moist waters is a sordid operation, as was aforesaid

at the beginning, yet is it not done without profit; because the Gold and Silver may be gotten out of the Waters by precipitation, and of the used Waters may Salt-peter be made. But now the case is far otherwise with fat Clay, for that, it being fat, the Spirits hide themselves therein, that the one half thereof can hardly be recovered, unless such an Earth be freed of its fatness by heating it red-hot: and this requires some labour to effect it.

But seeing that in all places of the World, wheresoever any Earth is, there is such a kind of Earth, and that in no small quantity, that contains Gold and Silver: and there hath not as yet been any body that hath endeavour'd to reduce it to any profit, and bring it into use, but especially when it contains not in it so much Gold and Silver as to defray the charges of separating it by Lead. But I have found out a very easie way of doing it with profit, and I think it my duty to disclose that Artifice for the publick good; and it is thus:

Mix such an Earth as contains therein Gold and Silver with the Water of Vitriol, which I have afore described, and make it up into balls somewhat bigger than ones fist, which throw orderly and by little and little into my first Furnace, or into my second distillatory Furnace, and draw off the Spirit by Distillation. The dissolved Gold and Silver remaining in the *Sal-Mirabilis* is to be extracted out of those balls broken small, with warm water, and to be reduced by Lead, after the afore described manner.

47. *By what Artifice Gold may be plentifully and easily extracted out of Granates, Agates, Saphires, Rubies, Sand, or other hard Minerals which suffer not themselves to be tamed neither*

with Lead, nor with sharp Waters.

It is certain that all Granates, what Colour soever they are of, or what place soever you meet with them in, whether you have them out of Rivers, or wash them out of Sand or fat Clay, or that you find them in the high Mountains and Rocks; they always contain in them much Gold: but by reason of their Glassy nature, they cannot by any means be extracted with *Aqua Fortis* or strong Waters, nor can they by reason of the hardness of their bodies fusion be molten with Lead. Hence it is, that as hitherto they have never been so handled as to have their Gold extracted out of them with profit, and therefore are they neglected as unprofitable, unworthy, abject, and contemptible Minerals, whereas notwithstanding it is a thing feasible for a man to enjoy their Gold and Silver with a little labour, and as it were without any trouble. But now what course must we take to doe this, seeing they elude the sharpest powers or efficacy of all strong or sharp Waters, whereby their heart may be penetrated, and Gold may be extracted out of their bowels? I answer; They are to be overcome by Concentrated Spirits, and which are reduced to the form of Salt, as also by a fusile Salt of Lead, and be so divested of the Gold they contain in them, and without this will the victory over them hardly be obtained. For Spirits being reduced to the form of Salt, doe abide the fire most patiently, and perform a double labour; one by their Acrimony, the other by a strong fire, insomuch that nothing can escape their power, and therefore all things are tamed and subdued by them, and doe afterwards readily obey the virtues or power of Saturnine Salt, and yield forth their Gold by fusion.

48. *A Demonstration, above the reach of any*

Confutation, shewing that more Gold and Silver may be gotten out of the Oars or Minera's of Gold and Silver, by the hitherto prescribed ways, by sharp Waters or Salts, and in a manner without Costs, than is wont to be done by many Expences, and by the fire of Melting.

I believe it is not unknown to any one that is but a little acquainted with the knowledge of the Minera's of Gold, that the Gold cannot be gotten out of them without the addition of Lead, or the help of some matter rendring the fusion more easie. And now when such Oars contain but little Gold, and contrariwise much Lead, or matters requisite to promote fusion are of necessity to be thereto used, how can it be, that that little portion of Gold or Silver should recompense or defray such great expences? Therefore such poorer Oars have hitherto lain as cast-aways, as being uncapable of bearing the Expences of reparation, and so are not put to any use, nor are at all profitable.

But admit that the Oars do contain as much Gold and Silver, as that the Costs of melting may be repaid by them; yet such a fusion, compared with this invention of mine of Extracting Gold and Silver with Waters and Salts, is as if you should compare Water with Wine, or the night with the most brightsome day, which have no comparison.

For, first of all, the common melting of Metals is accompanied with far greater Expences, than that Extraction of mine with Salts, which verily needs but a very little charge. Then farther, it can never be, that all the Gold should be so perfectly Extracted out of the Oars, but that some of the same will abide in the Scoria's; besides, the volatile Gold and Silver, which must necessarily be blown off by the

vehement blast of the bellows, and the acuteness of the fire, and so be lost.

Now amongst all the conveniencies that arise from the Extracting of Gold and Silver out of the poor Mines, that is none of the meanest, *viz.* that not onely all the fix Gold and Silver are conserved by the Salts, but also the Volatile too, and this latter is made fix and constant in the fire, together with that former fixt part, whereas by the Fusing fire it is all of it lost.

N. B. For the Waters of the Salts doe make the volatile Spirits of Gold and Silver, and which otherwise would vanish away fix and constant; for by a strong blast and force of fire are they rendred yet more fugacious. Hence comes it to pass, that [there is but the] one half part of that Gold extracted by the fire of the usual way of melting, that the Waters of Salts get out of the Oars. Upon this account my Invention doth not onely yield this commodiousness as to get both the fix and volatile Gold and Silver together, without any detriment out of the Oars, but also gets not a little in sparing Coals, (not to mention this, that one man does more in the Extraction of Gold and Silver by Salts, than three men are wont to doe in the common way of Fusion.

By what hath now been said, it is evidently apparent, what a deal of benefit and profit this invention will bring in all places of *Germany*. For this Extraction may be used commodiously and profitably, not onely in all Minera's or Oars both rich and poor ones, but also may be used in Extracting the Gold and Silver out of all colour'd Flints, wherewith all Rivers, Brooks and Fields do abound.

But some or other may haply say here, by what means can it possibly be, that Gold and Silver should

be extracted out of the Stones that lie too and agen every where in the Streets? I answer such, that indeed it is very rare to find fix Gold and Silver in such Stones, but yet they have in them a spiritual, unripe and volatile Gold, which is not onely made fix and constant in the extraction made by Salts, but it doth likewise turn some of the Lead it self that is added in the fusing and separating it into its own nature by Graduation. Hence 'tis evident, that in all places of the Terrestrial Globe wheresoever Stones are, good Gold and Silver may be gotten with profit, by a little labour and small costs. Praise and glory be eternally given to the most bountifull Lord God for such Inventions. *Amen.*

These are the Secrets which I publickly demonstrated and divulged [or communicated] in my Laboratory, for the benefit of my Countrey. And I do now again affirm and witness that if even the very bare Letter be observed, no body can err. And if so be that any one should change this or that order, and so think to better the Operations, and should err, let him not lay the fault upon me who have Written the naked truth, but let him blame himself.

I had several other things of no small moment, to have spoken to here at present, the which I shall God willing very suddenly dispatch in my second Century, for the present time does not permit it.

And in the said Century will I declare with a yet clearer and easier manifestation, those Secrets here disclosed, the which could not at present be done because of my too much hast.

And now I wish to all the pious Students after this so great an Art, a large and plenteous blessing from the mercifull Lord God, as to this so very excellent a

Work, that the poverty and want of abundance of miserable People may be supplied in many places. Which if it be (as I hope it will) it will exalt the honour and glory of the most high, and will encrease the Prosperity of the Countrey, and withall will check and keep under the most base attempts of mine Enemies. But especially if the counsel that I have proposed in my first Century, (*viz.* that every one may have liberty to exercise such Operations,) takes place. This being granted, it cannot be, but that Gold and Silver and Copper will every where be gotten out of the Earth, with the help of these my Writings, to the great profit and benefit of all the whole Countrey.

And so I conclude this so much hastned Appendix, wrested from me occasionally by perverse Men. Those things that I have not in such or such a place clearly and evidently enough expressed for want of time, I will express God willing in my second Century with a clearer Explanation, and thither do I refer the well-minded Reader.

The End of the Appendix.

THE SIXTH and Last PART OF THE Prosperity of GERMANY.

In which the *Arcana's* already revealed in the Fifth Part are not onely illustrated with a clearer Elucidation; but also such are manifested as are most highly necessary to be known for the Defence of the Country against the *Turks*: Together with an evident Demonstration, adjoyned [shewing] That both a particular and universal Transmutation of the imperfect Metals into more perfect ones by Salt and Fire is most true; and withall, by what means any one that is endued with but a mean knowledge in managing the

Fire, may experimentally try the truth hereof in four and twenty hours space.

To the Friendly READER, Health.

I taught in the First Part how the over-abounding quantity of Wine and Corn is to be Concentrated, that it may abide uncorrupt for a very many years, and when necessity requires it may be an help to many in need.

In the Second, Third, Fourth and Fifth Parts I taught the Extraction of both fix and unfix Metals, to great profit, and almost without any Costs, out of the bodies of vile, poor Minerals and Metallick Earths, which will not quit the Costs of a Fusing-fire, and this to be done by no costly Waters; and withall, how to bring them into use, which no body afore me ever did. And did not I disburse a great deal of Monies in building a convenient Laboratory, in which I produced such most profitable things to the view of every one, and demonstrated them to be true? And what have I reaped for these so great benefits I have done, but a most ungratefull casting off their remembrance? Have not all the things I have taught been accused of falsity and deceit both to the high and low, by those who have so audaciously dared to deny the Melioration of Metals by Fire and Salt? These have also asserted, that the making of Salt-peter of Common Salt is altogether impossible; and they have affirmed it to be a thing quite contrary unto nature, that Metals should be gotten out of the poorer sort of Metallick Earths by the help of a Water made of Salt-peter; but yet that even this is most certainly true, the Appendix of my Fifth Part, and my Second Century, doe demonstrate by indubitable Experiments.

And albeit that the three said Arcana's *are evidently enough delivered and described, so as even to be*

palpably felt by the hands of those that know how to manage the Fire, yet notwithstanding they have brought but very little benefit as yet, because that although they are most true, yet are they contemned and disregarded by unskilfull Men, out of meer Envy and most perverse hatred, and doe even yet stick in contempt.

However, not regarding these [base dealings] and that I may mete them all things in full measure, I have a mind yet farther to detect some secrets, by which there may redound to the Country very notable fruits: And that not onely by converting the many Metallick Earths that contain in them Gold and Silver, and which have not hitherto been profitable to any unto a gainfull and a beneficial use; but also by defending the Country against the most dangerous invasion of the Turks*, who are the Capital Enemies of the whole Christian World, and that by so strong and efficacious a defence, as never any mortal man did yet contrive the like of.*

As to what belongs to Mineral Treasures, I have exhibited a sufficiently clear and manifest description of them in the second, third, fourth and fifth Part of the Prosperity of Germany*, and also in the Appendix to the fifth Part, and in the second Century. But yet there is nothing so perfect and absolute but that in process of time there may be added and adjoyned thereto some new thing, and somewhat of perfection: Witness my Instrument which I mentioned in the second Century, by the help of which, Gold, Silver and Copper are easily and plentifully extracted out of their Metallick Earths, and that on such wise, as that there are requisite no other Costs but the bare Charges of the fire. And farther, this way would bring no small profit even from those Metallick Earths which are ranked amongst the poorest sort of Oars; if it were well known, and exercised in many places, there would flow thencefrom most mighty*

profit throughout all Germany*, and the said Instrument would by its assistance wonderfully promote the same.*

For although I have heretofore publisht several ways of preparing sharp Waters, and of extracting the Metals with them out of the poor Minerals; (and yet even these ways bring no despicable gain) yet they perform not that which is wont to be accomplished by the help of the said Instrument. For this Instrument serves not onely to extract those sharp Waters in a greater quantity, but is also far fitter and more convenient for the Extraction even of the Metals themselves out of their Earths, and for the separation of the Dissolving Menstruum *from the Metals, than those Glass Vessels are, which have been commonly used about this Operation.*

Therefore it much concerns him that employs himself about these kind of Operations, well and thoroughly to know its Use. I made indeed some mention of the same in my Second Century, but yet not so clearly as for any one thoroughly to understand its Use by what I there spake. Therefore I have thought it expedient to give here somewhat a clearer and more perspicuous description of the same, that so I may not seem to be at all wanting in my diligence unto any one, but may be said to have done all things with a due candour and openness.

The Description of the Instrument, serving for the plentifully preparing of Spirits, and for the easie extraction of Metals out of their Oars, without much Cost.

This Instrument is to be made of good Earth, that can sustain both the Fire and the Spirits; Metals are unprofitable to make it with, because they doe not long resist the Corrosion of the Spirits; But now, that the said Instrument may the longer abide in the Fire,

its outside superficies must be fenced with Iron bonds. This Earthen Vessel therefore must be made of such an Earth as abides the violence of the Fire, and resisteth the Corrosivity of the Spirits, so as that it breaks not nor chaps with too much heat, nor be corroded and eaten thorough by the Corroding Spirits. Such Earths there are enough of too and agen in *Germany*. Moreover, this said Instrument may be made greater or lesser, according as you are minded to prepare a greater or lesser quantity of Spirits; But however, it must not be made too big, for then (if it exceeds a due magnitude) it will not abide the fire so well. Therefore is it necessary to have several of these Instruments made, if a man be minded to make at one and the same time a great quantity of Spirits. But if any be minded to set about this Operation so as to have huge quantities of Spirits, it will be his best way to have his Instrument made of Iron plates, such as the Armourers use, and to strengthen them with Iron rods, and so fence it both in the inside and on the outside every-where with Lute or strong Clay. For by this means the Instrument being made of a sufficient bigness for the work you would put it to, will in its inward superficies hold the Corroding Spirits, and in its outward superficies undergo the violence of the fire without detriment, and be far more commodious than so many little Instruments that are made onely of Earth.

Of the Form and Figure of this Instrument.

The matters out of which the sharp Spirits are to be drawn, are not to be put nakedly in [as I may say] into the Instrument it self, but are to be put in some strong Earthen-pots and so put in, that after the Spirits are distilled off they may be again taken forth, and other Pots fill'd with new matter may be put in,

in their room; and this to be so often done as need requires.

And seeing the Salts that are to be distilled are not put naked into the Instrument, but are put in, in Earthen-pots; the Instrument must necessarily be so prepared, as that those Pots may be put in as often as need is, and be again taken forth, when the Distillation is done, and new ones be put in, in their stead.

The Instrument therefore must be of a like bigness both above and below, and 'tis no matter to have it much exceed the heighth of your Pots you put in.

One side of it must have a Door to put in the Pots at, and to take them out again, the which Door must be made to shut handsomly after your putting in and taking forth.

To the other side must be fitted a Pipe somewhat large, by which the Spirits may have a passage forth into the Receiver. And the Instrument must be on such wise placed in the Furnace, as that the Door and Pipe may lie without the said Furnace. To the Pipe must be added another Leaden Pipe, twining round like a Serpent, and therefore is by the Chymists called a Serpent [or a Worm:] the which must be set in a Vessel full of Water, that so the Spirits passing out may be cooled and be caught in the Recipient.

Of the use of the Instrument.

When you will distill your Spirits, you must put thereinto so many Pots filled with your prepared Salts as your Instrument can hold, then close the Door well, and put Fire in the Furnace. This done, the Spirits will ascend out of the Pots thus heated in the Instrument, and finding no other out-let but by

the Pipe and Worm, they will enter into them, and being there cooled will run down into the Receiver. You shall know if all the Spirits are forced out of the Salts or not, when they cease to flow out through the Worm into the Recipient. Which when you shall perceive, you must open your Door and take out the Pots in order, and then put in new, that so the Distillation may be continued on without any delaying. But now, those Pots that are to be put a-new into the Instrument, must be set nigh the Furnace a while, that they may grow hot: for else being put in cold, they would not brook the sudden heat, but chap and break. When all the Spirits are distilled off, then you may put in other new Pots in the room of them you took out, and the Operation is to be so long and so often repeated as need shall require, or as any one has a mind to do. The Salts that remain behind in the Pots you take out, are to be moistned and macerated with some Phlegm or weak Spirit, and they do again, sometimes emit Spirits by Distillation, but yet not in such quantity as at first they did.

This is that way of preparing sharp Waters usefull for the extractions of Copper and Gold. But as for *Aqua Fortis* requisite for the extracting of Silver, it cannot be prepared by this same Instrument, because it will corrode the Worm or Leaden Pipe, if it should pass through it, which the Spirit of Salt and *Aqua Regis* do not do.

N. B. When therefore you would make an *Aq. Fortis*, you must make you another twining Pipe or Worm of some other Metal which will not be preyed on by the *Aqua Fortis*, or else set some other Stone Vessels to the Nose of the Pipe that goes out of the Furnace.

It is also a thing possible to be done, to make such strong *Acetum* of Corn and Honey by the addition of some Salts, as that it shall not onely extract Gold and Silver, but also Copper and Lead out of metallick Veins or Earths.

Thus much may at present suffice to be spoken concerning the preparation of sharp Waters needfull for the extraction of Metals out of the Oars. The preparation [or Operation] it self follows.

How Metals are to be extracted out of their Earths or Oars, by the help of this Instrument.

The preparing or fitting of the Minera's or metallick Earths for extraction, hath been described in the Appendix of the fifth part, and therefore needs not be repeated here.

But as we there showed, that the roasted [or calcined] and powdered Oars were to be put into Glass or Stone Cucurbits, that so they might be moistned with the sharp Waters, and be macerated [setting the Cucurbits] in warm Sand; so the very same thing is to be done here, this onely excepted, that [*viz.*] the earthen Pots supply the place of Glass and Stone Cucurbits, and the Instrument it self in which the extraction is made, performs the office of Sand: After the extraction, the Water impregnated with the extracted Metals is poured off, and the remaining matter it self is washt by pouring common Water thereupon, after such a manner as hath been prescribed in the Appendix of the fifth part.

By What means the Metals extracted by the dissolving Water out of the Oars are to be separated from that same sharp Water without any Detriment, nay rather with an augmentation

of the said Water.

We have taught in the Appendix of the fifth part, that if a Man be not minded to precipitate the Metals out of the Solution by the contraries, *viz.* by Alkalizate Liquors, then there is no commodiouser and nearer way than that which separates the dissolving Water from the extracted Metal, by Distillation in Glass or earthen Vessels.

If now any one is minded to encrease his dissolving Water in this separation he may be Master of his desire by adding thereto common Salt, and drawing off the Water from it, which said Water will by this means be encreased and rendred stronger. And now there will come no inconvenience to the Metals themselves that are held up in that Water, in that some Salt remains with them, (no,) for in the reducing them, the said Salt gets them an easier and readier Fusion and Flux.

But yet it is not necessary to leave the Salt with the Metals, seeing it is better to separate it from the Metals with common Water, and so use it again to the same labours rather than let it be lost in the melting.

The Reduction of the Metals from which the dissolving Water is separated.

Albeit that that Reduction hath been already described in my second Century, yet I thought it worth while here again to repeat the same in a few words.

It is to be done two manner of ways, and that partly in Crucibles, and partly in the melting Furnace which the *Germans* call *Stichofen*. The pure Metals, as the Gold and Silver are wont to be molten and reduced in Crucibles: the Copper may be reduced in

the said Furnace, and needs nothing to be added about its Reduction. But for the reducing of Gold and Silver, fix Salts, the Glass of Lead, Borax and other additions of that kind, (of which we have made mention in the second Century) may be made use of. And as touching the addition of those matters which are wont to be used to promote the easier Fusion, this is primarily to be regarded, whether or no the Metals are pure and alone [by themselves] or else have other Metals mixt with them, that (so acordingly) convenient additions may be applied. For if the Gold should also have Copper or Iron in it, then there cannot be any better thing added than Antimony, which reduceth the Gold by one and the same labour [or Operation] and also separates the Copper and Iron therefrom, which thing, other such like matters that are used to make the Fusion the easier, do not perform. Therefore it is necessary that he who would set himself about such Operations, do well understand the Artifice of a metallick Fusion, and so administer or order his labours by adding or taking from, according as the subject requires and as is best. It is impossible to prescribe such things to any one in such a manner as to make him presently understand, learn, and imitate the same.

Some other manual Operations which are needfull to be known in the use of this Instrument and which may be exercised.

First of all, it would be no small or mean *Compendium*, [or good Contrivance] if this same Instrument were composed of two or three parts, taking for the lowermost part a broad Iron Pot, and so to set on the upper part with its Door and Pipe thereto annexed. And because the bottoms of the Iron Pots do a little bow rounding, and that yet notwithstanding the Pots

you put therein may not stand leaning or awry, the bottom is to be made level with calcined Allum, that so the Pots put in upon that may stand upright. From hence likewise ariseth this Commodity too, that if your Pots should chance to break, and the dissolvent run out, it would not be so lost but would lodge it self in the burnt Allum, and may easily be recovered in the preparation of the sharp Waters and be applied to use.

Secondly, the Instrument may likewise be so prepared, as that the Pots may be put thereinto by taking off the upper part, and then the Pots being put in, the upper part must be adjoyned again to the nether part, and [so] be again covered with its Cover; for being thus, there needs not the Door in the side to put the Pots in by.

N. B. There must be some Notch or Channel likewise fitted to the top of that upper part, which being filled with Sand may receive in it the Cover, and so prevent the out-let of the Spirits that way, by means of its tight shutting; as we have taught in the second part of the Furnaces. The Instrument prepared on this wise, will haply be more commodious to many Men, than if it had a Hole or Door in the side. But every Man may choose either this or the other way, which he pleaseth.

Thus have I now taught, and opened the use of my more secret way of easily preparing the sharp Spirits of Salts in great quantity, and the manner of dealing about the Extraction of Metals out of the poorer metallick Earths: Away (I say) most easie to do such great things, and which was never as yet known unto the World.

But yet I doubt not but that the Metals will for the time to come be plentifully and very profitably

extracted (and so applied to common use) by the help of this Artifice and Instrument, out of the poorer *Minera's* which contain in them Gold, Silver, and Copper, and which will not quit the costs of the Fire; and forasmuch as by the help of this Instrument, the sharp Spirits of Salts may be gotten easily and in large quantity, not onely for the Extraction of the Minerals, but also for the concentrating of moist Fires, and seeing that wonderfull things may be done by the help of those Fires; I do therefore commend it to the Studious of Art, as a thing of better esteem than ordinary, and have sufficient reason of so doing. For to omit the saying, that those cold Fires do give an excellent Magnet for Water or Ice, they do also abound with such virtue as by which they can ripen and better the Metals; the which we will make a larger description of, in what follows.

Besides too, there may haply be effected far greater matters with those cold Fires, as to the defence of the Countrey against the *Turk*, that Capital and Bloud-thirsty Tyrant and Enemy of the Christians, in some cases than with Gun-powder: if such moist Fires be cast into places a prety distance off by suitable Instruments, or be forced out of those lesser and greater Guns and War-like Canes, they will bring far greater Detriment to the Enemies than Gun-powder is want to do.

By this means, one weak Woman will in some cases be able to repel many armed Men; but this is a thing which such Men as are unskilfull in natural affairs, will deny till it be made manifest, and used against the *Turk*. Therefore I have a mind to set aside all other businesses, and to make those kinds of admirable Fires to the utmost of my power in great quantity, forasmuch as I well and assuredly know

how great Detriment may be brought upon the *Turks* by the help thereof.

Fires they are which any one may carry about with him like Waters; they will not burn or overthrow Horse and Man sooner than any have a mind they shall. Nay yet more, if any has a mind to fortifie their Virtues, he may by adding other Fire-breathing matters, make them far more vehement and efficacious, and do far greater matters with them as being much more hurtfull than with those simple Fires.

And now seeing I have so very much commended the concentrated Fires of Salts, to

1. Diligent and provident Masters of Families, thereby to take away the superfluous watriness from their smaller Wines, Ales, and other Drinks, and so to concentrate them, and carry them (in case of necessity) into the strong and fenced Cities;

2. To the poor Chymists, that they might by them correct and better the Metals and so help their own poverty and want;

3. And to the Christian Chieftains of War, and faithfull Rulers of the Countrey, that they may stoutly resist the *Turks*, that are the sworn Enemies of the Christians.

I judge it altogether necessary to treat of them somewhat more clearly.

By what means and way this threefold use of cold Salts may be most profitable to the Countrey.

First of all, the concentrated Spirits of Salt may bring most great advantage, by concentrating the poorer sort of Wines, the which they make better, as is

shown in the second Century: when the superfluous Water is removed from them, insomuch that they do not onely keep their goodness constant and durable, but may likewise be far more commodiously and easily transported out of one place into another, so that necessity requiring, they may be more easily transported out of such places as are more remote from Cities and fenced places into the stronger holds and fenced Cities, and so be conserved.

It is as yet fresh in every ones Memory how miserably the case stood with Men in the foregoing War, which lasted thirty years. If any Farmer had his Cellars full of Wines, and the Soldiers break in to the Countrey, did horribly abuse the gifts of God, that which they could not consume by their detestable Gluttony, they wickedly spilled upon the ground; the Soldiers I say, and such Men as profest themselves Christians, and durst boast of the Christian Religion. From hence may it easily be conjectured what it would be, if such a multitude of *Turks* should over-run our Countrey, which imminent evil, God of his mercy turn away from us.

In the days of *Noah*, the Men then lived in all security, and not at all regarded the Preachings and Admonitions of that godly Man, by which he exhorted them unto Repentance for 120 years together, they did Eat, they Drank, Married and gave in Marriage, till the Floud swept them all away, and there was no more room for Repentance left, as sacred Writ testifies.

We reade of *Sodom* and *Gomorra*, that the Inhabitants of those Cities being even drown'd in Leachery, did so despise the reproofs and warnings of the godly Man *Lot*, untill a Fire was sent upon them from the wrath of God and consumed them.

Who is there that in this Season feareth God, and lives piously? He that is the strongest oppresseth the weaker, nor does at all think on this, that there is one far more powerfull than he himself is, who comes when he pleaseth, and punisheth such powerfull Oppressours. But these things, and such warnings of this nature are plainly mockt at.

Did not God sufficiently enough warn us the last year 1660, and shewed unto us his wrath, by those dreadfull Tempests and Storms, and Earthquakes, wherewith almost all *Europe* trembled. Doth he not also this very present year (1662) shew us his self-same displeasure? What portends that Comet that was seen in the Heaven, any one may easily guess what it means. Verily it threatens nothing else but evil, especially because it extended its Tail contrary to the usual wont of other Comets, towards the upper part of the Heaven, just as if it should say, I will show unto the Men, that 'tis not this or that Countrey, this or that Enemy that shall chastise you, but 'tis the King himself of all Kings, who is in Heaven, that hath purposed to punish you for your Wickedness; whose Rod ye may [yet] divert from you that is stretcht out to punish you, if you apply your selves to him by serious Prayers, true Repentance, and unfeigned amendment of your Lives, now whilest you have time allotted ye to repent in, if such admonitions as these can but find entertainment with you. And what I pray will this warm Winter bring upon us, the which being destitute of all cold Ice and Snow hath permitted the Trees to flour in the very month of *February*, and the Medows to be clad in Flowers, and ripe Cherries to be seen? Without doubt, nothing else but all kinds of poysonous Diseases and which will speedily kill Men, and with which mankind will be afflicted; and if so

be that an intense cold should yet follow, which may easily be, there would doubtlesly follow a great Dearth of Grain and Provision by spoiling the Wine and Corn, whose buddings are already come so far forth, as that the cold may easily destroy them. And now are we not sufficiently enough admonished by these fore-runners and signs of the wrath of God coming on us, and hanging over our Heads?

Besides all this, let us consider that great Conjunction of all the Planets in *Sagitary*, such as hath never been since that time in which all the Planets were in Conjunction in *Aquarius*. And this Conjunction [in *Aquary*] preceded the deluge, which destroyed all mankind by the breakings in of the Waters, *Noah* and his onely excepted. But as concerning what that great Conjunction in *Sagitary* the next year 1663 will show us, and bring upon us God knows. *Sagitary* is a martial sign, and deadly, and portends nothing but Dissentions, Seditions, and uproars of War; and therefore prophesieth unto us nothing but bloudy Wars, insomuch that it is much to be feared that this ungratefull World will be consumed, and blotted out as 'twere by Fire, and the Sword, and the anger of God: which evil, God of his mercy turn away from us. Certainly these Conjunctions are not wont to fore-signifie or bring along with them any good. But I heartily wish I may prove a Liar in this case, though I fear me, that there is more evil coming upon us than will be welcome unto us.

For when God sheweth us any thing with his Finger, it should be of more concernment unto us than all humane Writings, for they may err. But God never does any thing in vain and without cause. Never did there at any time a Comet shew it self in

the Air but many Calamities succeeded it. That old Proverb may very likely prove true, which the Ancients have pronounced, *viz.* that it will come to pass in the year 1660, that Alchymy will begin to flourish, but will bring along with it such changes for [some] years following, and such dreadfull changes too, that the third part of Men will perish with Famine and Pestilence, the third part will perish with Fire and Sword, and there will be but a third part onely left.

But yet I would not that you should take or look upon this my prognostication on such wise as if all these things should infallibly come to pass as I have predicted. No, I was willing onely to open to you my Meditations upon the years to come. For all things are seated in Gods power alone, in whose hands onely and alone we know our firm helps and assistance to be ready for us, and therefore do not in the least confide in our own strength and power, which are more vain than are all fading things.

But forasmuch as there are natural means granted us, of driving away our Enemies, we may well use them as far as in us lies, for that it belongs unto every Christian Man, to do his utmost to repell with all his power the common Capital Enemy of all Christendom.

And now therefore that I my self may not be found to be the least in defending my Countrey, I have determined to exhibit in this Book the help and assistance that I can afford, and this is not Money and Wealth which I have not, but by offering such artificial inventions, and disclosing them, whereby the Enemies may be valiantly resisted. For in all things we see, that many times far greater things may be done with Wisedom and Prudence, than with

Strength and Fortitude, and this is clearly evident in the most efficacious Operations of Gun-powder, which produce far greater effects than Mens hands, though never so strong, could ever bring forth.

'Tis well known, that the use of Gun-powder was not always known, but was first found out by a certain Monk in *Germany*, in the year of our Lord 1380, who by chance lighted on the finding of its dreadfull strength. Neither is there any one ignorant, what great Victories they that well knew its use, obtained over their Enemies afore it was made manifest. But when it became publickly known, then it served both Parties, so that neither part had more advantage by it than the other, and then the deciding the Controversie consisted (next the blessing of God) in the multitude of the Men, of which their power was composed, and not in Art. And like as it seemed a meerly incredible thing at first when it was heard of, that a Powder of such mighty force could be made of such vile Subjects, *viz.* Brimstone, and Salt-peter, and Charcoals: Even so will it at first exceed all belief, when it shall be heard say that Waters may be prepared out of such Subjects, which said Waters can doe such wonderfull, and so many great things.

It is also reported [or Chronicled] that the said Monk did not search after Gun-powder purposely, but being addicted to Chymistry, and occupied about Operations upon Salt-peter and Sulphur, endeavoured to distill a Water from them. Now these being mixt, and by chance taking fire, he perceived them to break every thing, and rend it into pieces: And hence came that man to know the unheard-of Virtues of Salt-peter and Sulphur, which being so thoroughly contrary to each other, made such great concussions or shakings. The same thing hapned

even unto my self, for purposing to make sharp Waters out of Sulphur, Salt-peter, and other Salts fit for my purpose; I perceived in such Operations, that far greater things mought be brought to pass by such firey Waters than could be done by Gun-powder. Nevertheless, I buried these Secrets in great silence, nor manifested I them to any man, though I knew them above these twenty years; fearing this, that should they be known, they might be as Instruments in the hands of the Christians to torment one another with.

But now seeing God hath vouchsafed to bestow a peace upon the whole Christian World, and that the *Turks* doe begin more and more to persecute and vex the Christians by their Tyrannical Persecutions, and endeavour even thoroughly to root them out, as they have already made a beginning in *Hungary* of their detestable attempts, I advised with my friends whether or no it would not be expedient to detect and lay open those Secrets to the Christians, that so they may be used against the *Turks*, and I was advised by these my friends to proceed on in the revealing of them. Upon this account (all other businesses laid aside) I wholly betook my self to this very one thing, to get great store of those kind of firey Waters in readiness, which may be made use of as most substantial bucklers or defence both offensively and defensively against the *Turks*. Now I have done this the more willingly and readily, because they kill no man, but doe onely so far debilitate them, that they may be overcome, and easily taken and made Captives. For were this invention of mine such as would kill men, I would never have at any time produced it in publick, and thus divulged it. And therefore I am even yet of this mind, that that Monk *Barthold* did not well in

divulging the preparation and use of Gunpowder, by which such a multitude of Men are destroyed and slain.

But by this Invention of mine, no man is slain, and yet the victory wrested out of the Enemies hands. And the Enemies being taken alive and made Captives, may be constrained to work, and in my opinion may bring more benefit than if they were slain.

I doubt not but that the things I here propound may seem impossible even to the wisest [sort of] men of this World; nor indeed is it to be wondred at if it be so; for they are unheard-of Secrets, and unseen, and so exceed all belief. I dare not here trust my Pen too much, though I could disclose them in a few words, and so, as to bring every one to acknowledge the truth hereof, and to feel it as it were with his hands. But I must deal warily, lest such sharp, and yet not killing, weapons fall into the Enemies hands.

But yet that I may in some sort satisfie the desirous Reader, I doe signifie unto him in brief, that all the whole Art lyes coucht in this knack, that vast quantities of those artificial Waters may be gotten without great Expences; and being prepared, may be afterwards applied to use by some certain secret Instruments both offensively and defensively. For those watry Fires, or firey Waters which I speak of, are of such a burning nature, that neither Men nor Horses whom they touch are able to resist [or endure] them; And yet they doe not kill, unless one be minded to slay others, and then they must have a more peculiar preparation. But as they are by themselves, they kill none, but doe extreamly disturb

both Horse and Man, that it makes them even impatient of the pains, and so forceth them upon one another, whereby their order being broken, they ruine themselves. This done, the victory is as it were given into the adverse parties hands, whereby they can without any labour vanquish and take their Enemies Captives. I dare not to say any more hereabouts, this onely I add by way of overplus, that even Women (where Men are wanting) may not onely (by this invention of mine) drive off the Enemies from any fenced place, but they may force them out again out of the place, or o'erwhelm the Company of them that are entred with Stones. Though this seems an incredible thing, yet is it most true, and will without doubt, after it shall come to light, in a short time serve as a most notable defence for the Countrey.

And as touching the easie, and not at all costly preparation of the moist Fires and their due use, together with the Instruments hereto requisite; all this shall be shown and detected to those onely who both can and will use them against the *Turks*. But to others not, and this we were willing to signifie by way of admonition or advice.

This little, but yet exceeding weighty Secret, and which may be used against our Countries Enemies with most notable benefit, I have revealed enough of at this time. Mean while I hope, that even this very year the Enemies of the Christian World will be notably endamaged by it, which God of his grace and mercy grant, that it may be a solace and help to the Christian World so dreadfully persecuted by the *Turk*, even for the honour and glory of his holy Name. *Amen.*

Now follows the third use, and that consists in the melioration of the Metals, by which also great benefit may redound to the Countrey.

As for such things as concern the true and indubitable melioration of Metals by Salt and Fire, I have already sufficiently enough demonstrated in the fifth part of the Prosperity of *Germany*, and in the Appendix thereunto.

But seeing my true demonstration there made, seemed not sufficiently clear and evident to not a few, and that therefore they have most lyingly dared to aver, that there is no such thing as a true transmutation of Metals, and that such like Affirmations as these are meer fables, meer falsities, and meer dreams: Therefore I could not choose but (to stop the mouths of such wicked Men, and shame them,) to lay open and publish an evident and palpable truth.

And this is no great task for me to do, for I was many years ago certain of the truth hereof, and therefore can easily set it afore the Eyes of others, and that not onely particularly [or a particular transmutation] but also universally, insomuch that even the blind may see and palpably feel, that the transmutation of Metals is not an old Wives Fable, but is a certain and firm Science, and what is risen even from the foundation of nature her self. If now I shall prove it to be thus, I have then I hope secured my affairs, and have not onely defended the Writings my self have sent abroad, but withall the most true assertions of other honest Men, and so shall have evidently demonstrated those things which to the greatest part of Men seems a thing impossible to be done.

Albeit that there are many who have left us the truth in their Writings, yet are they so involved in obscurity, that such as know not the Fundamentals of the Art, can never learn ought of certainty from them. Whence it comes to pass, that so many Men have vainly attempted the Art, and therefore the Art it self hath been mightily despised.

The Transmutation of Metals is not a thing of so small a moment (as that eminent Philosopher *Sandivogius* witnesseth) in his Preface prefixed to his Writings; where he also tells us, that he that obtains the knowledge of the same, so as to transmute any imperfect Metal into a more perfect one, though it be done without benefit, hath met with an open Gate, and entrance leading to greater matters, and this is also exceedingly agreeable with the truth. For if any one shall take some imperfect Metal, and by handling or dealing with it with such or such matters, shall find that it is advanced to a golden or silvery nature, may more deeply look into the business with fuller and more accurate Meditations, and [at length] wholly search it out, *viz.* whence that bettering proceeds, and by what means or in what manner his labours are to be contrived.

And now when such an one doth make fix and constant, such or such a Metal by the benefit of the Fire, and useth no other matter about the Operation but Salt, and doth really find a true melioration of the Metal, certainly he cannot ascribe it to any other thing but the Fire and Salt: and now whereas he assuredly knows, that the melioration of Metals can be perfected by the help of no other thing but of Fire and Salt, he will not need to search for any other, but will rather wholly apply himself thereunto, whereby he may most commodiously deal with the Metals by

the means of Fire and Salt, and better them with profit. And if now he be once Master of his desire, he will gain sufficiently thereby. But if not, he cannot blame the Art but himself, who indeed sees the possibility of the Art but hath not (yet) entred in by it, or through it to the great Treasures it discloseth, so as to take to himself a due or competent part. But forasmuch as such happy Men are very seldom found, who find the Key that opens the Doors to such Mysteries, I judged it a thing worth while if I did here detect this very Key, and show by what means the Gate (by which the closest of Arts is made fast) is wont to be opened. And if now it shall please the Studious Artist to enter thereinto, he may with all my heart, and so enjoy those Treasures. I will not pass the bounds I have intended to observe: it is sufficient for me to have shown the right and kingly way, wherein every one may go that listeth, that so he may arrive to his wisht for end.

But as for the Key that unlocks the Closet of Art in true Alchymy, I do confidently affirm, that Salts are such Keys, and especially Salt-peter, and also common Salt and Vitriol, each of which is of it self efficacious enough to open the Door which shuts the Parlour or Closet of Arts in Alchymy. But one Salt joyned with another as is expedient and in convenient wise as Art requires, does effect more and show greater power than if it abode alone, and this my Writings do too and agen largely shew. But those Salts are in an especial manner more excellent as to power and virtues than others are, those I say which being first made volatile or spiritual are afterwards made corporeal, like as the following example doth evidently demonstrate.

An evident demonstration of the possibility of

transmuting the viler Metals by Salt and Fire into more noble ones.

Take of Vitriol two parts, and of good Salt-peter one part, mix them well, and being mixt distill an *Aqua Fortis* therefrom, with this Water, dissolve Silver or Lead, and pour into the Solution some Spirit of Salt, or else some common Salt onely dissolved in Water, that so the dissolved Metals may be turned into white Powder, and precipitate to the bottom of the Vessel. This done, wash off the *Aqua Fortis* from the *Calx* of Silver or Lead, with Rainwater, and you shall find it to be one quarter part encreased, and this augmentation cannot be washt off with any Water. Now these saline Spirits do make the *Lune* and *Saturn* so very volatile, fusile, and flying, that they melt in a small heat and penetrate all hard Bodies. Upon this account I called those fugacious and fusile Metals, by the name of a *Mercury*, which said *Mercury* of *Lune*, or of *Saturn* hath assumed to it self onely so much of the Salts as it needed, to amend it self in the Fire, when they mutually act upon each other, and the Salt maturates the Metal.

But what course shall we now take with these Metals, seeing they are so very volatile, that they cannot resist the indifferently strong force of Fire, and therefore go away in fume? And forasmuch as they abide not the Fire and do not die, by what means can they be amended?

There is no better way to be taken with them here, than (for prevention of their volatility) to add to them some metallick body, into which, the fugacious exceeding fusile, and Salt Metal may hide it self, and so brook the Fire. And amongst these six metallick Bodies, I know not as yet of any better than Tin reduced into Ashes, which is most fit for this

Operation, because it is the most unfit or hard to melt of any the *Calx's* of the rest of the Metals.

If therefore you will make experiment of this Operation, adjoyn to one part of the *Mercury* of *Lune* or *Saturn* two parts of the white Ashes of Tin, which being well mixt and put into a Glass Cucurbit well fenced with Lure, set it into Sand, put Fire thereinto by little and little untill the matter in the Glass be well heated; in this darkish red hot heat, leave it so long untill some part of the matter doth ascend by sublimation up into the Alembick placed at top, and up the neck of the Cucurbit. Then you must put on another Alembick, and take out all the sublimate out of the former Alembick, and put it back upon its matter in the Cucurbit, and it is to be again left so long in the Fire, untill there doth again ascend some part by sublimation into the Head. This being taken out of the Head is to be again put into the Cucurbit, and to be added to its own matter, (and to be proceeded with) till again some portion sublimes up out of the matter into the Alembick. Now these labours are to be so often repeated, untill there ascends no more matter up into the Head, and all the matter abides behind in the bottom of the Cucurbit fixt. This being done, a stronger Fire is to be administred, that the Metals may be operated upon by the Salts. For by how much the more and longer they endure the violence of the Salts, so much the better do they grow, which being taken forth and reduced by the adding unto them their due matters and being separated by a Cupel do yield forth a notable encrease of Gold and Silver.

This undoubted Experiment and evident Demonstration, doth (by its evident Operation) clearly and perspicuously teach and prove the

melioration and transmutation of the Metals into better and more pure; but if this way seems to any very laborious and full of troubles, I will show him a more compendious way and such as is of less labour, for the sake of searching out the truth.

Fill a Hassiak Crucible (one of the best make) with the self same mixture, *viz.* one part of the *Mercury* of *Saturn*, and two parts of Tin-ashes, and squeeze in the matter thereinto with your Thumb pretty hard, and fit at top of this Pot, another somewhat lesser, so as that they may shut close and tight at their mouths, and one may not fall off from the other, if they be turned (topsie turvy:) Now in this upper Pot, put some Plates of Copper in, afore you place it on the lower one, yet on such wise that in the turning the Pots (up and down) they fall not out of their places. Each Pot likewise is to be well fenced with Lute such as will not chap when it is dried, and yet it may be mended if it should a little cleave by dawbing some more on, and this is done, that no fume at all get out. The Lute being dried, place this double Pot or Crucible in a circular Fire, and augment the Fire more and more, and move it nearer and nearer it untill it be well heated. Then put thereto larger Coals, and cover the Pot all over with them, that it may be every where red hot, in which great heat of the Fire it is to be left some two or three hours. Then being cool, take out and open your Pot, and you shall find the Copper Plates in some sort tinged with a white colour, but yet this colour is not so constant and fix as to abide in the Cupel or on the Test with its Body. Therefore necessity requires that those Plates be dissolved in *Aqua Fortis*, and be precipitated by pouring thereon Salt dissolved in common Water, in which precipitation the Silver *Calx* settles to the bottom. This *Calx* being freed of

its Saltness by pouring Water thereon, and being dried, is to be wrapt up in a Plate of Lead, or some sheet Lead made as thin as Paper, and be put on a red hot Test, in which there must be a little Lead in Flux, which may the more readily receive the silvery *Calx* wrapt up in the leaden Paper, and which is volatile, and may hinder it from going away in fume; the Lead being consumed, there will be a grain of Silver abiding on the Test, which being dissolved in *Aqua Fortis*, will let fall some Gold to the bottom. If any of the remaining matter in the Crucible be to be reduced, then boil it with Lead, and let it be reduced into *Scoria's*: out of the *Regulus* will there also remain on the Test a grain of Silver containing Gold in it. But this way brings no profit, as being here taught for this onely end to demonstrate the possibility of the thing. But if you would get any profit by such an Operation, it will be altogether necessary to use such Vessels in which nothing at all may go away in fume, but all the matter may abide together, and may so get a fixity and constancy: and this cannot be done in Crucibles, but it will bring a profitable melioration by the said way.

Some may now demand from whence that Gold and Silver should come? whether out of the Lead or out of the Tin? doubtlesly it comes from both. And therefore seeing the Copper Plates in this Cementation, as likewise the cementing powder it self have put on a golden and silvery nature, can any one doubt that this is a true Transmutation by Fire and Salt? And this is especially manifest even from the Copper Plates, which had nothing at all toucht them, save the saline Spirits ascending up out of the Cementatory Powder, which in the heat of the Fire penetrated the Copper, and amended it in so short a time. Is there any one now so blinded as that he

cannot here see, that this bettering the Metals proceeded from Salt and Fire. Certainly no body will be able to heal him that is blinded with such a darkness of his sight, and therefore must he even lie all his lifes time in such obscure mists. For this Operation is set down so clearly and evidently that it may be even felt and perceived with the hands.

N. B. If so be any one is desirous of getting more Gold and Silver by the help of this Operation, he may use the *Mercury* of *Lune* instead of the *Mercury* of Lead, for it will yield far more than *Saturn* will.

I could exhibit no small variety of these kind of Experiments, but that the shortness of time bids me stop, and forbear their description; those that cannot learn ought from these things, greater ones will not be at all usefull unto them. Thus have I a-new evidently demonstrated, that a particular melioration of the Metals is done by, and proceeds from Salt and Fire alone.

An infallible demonstration, that a true tincture or universal Medicine may be made by Salt and Fire, for the melioration of Metals.

Recipe one pound of the *Mercury* of Lead, or rather of *Lune*, of the Ashes of Tin two pounds, mix these matters together and put them into a Glass Retort coated, and put it in Sand, or rather in an open Fire, and give a Fire by degrees. In this Operation, the Salts inhering in the *Mercury* of *Saturn* or *Lune*, do display or exercise their virtues upon *Jupiter*, and seize upon it and leave the *Lune* or Lead, and ascend up into the neck of the Retort like *Mercury* sublimate, and are very heavy and ponderous, and do very rarely fall down into the Receiver, because they presently settle assoon as ever they feel any

Refrigeration. Therefore it is needfull that the neck of the Retort be somewhat wide, that so the *Mercury* sublimate may meet with space and room enough, and may not by wanting room break the Retort. Now when the Retort has been kept three hours in a red hot heat, which time is requisite for the *Mercury* sublimate to ascend in, then cease from continuing or keeping on your Fire, that so it may cool. Then take out the sublimate out of the neck of the Retort when cold, and you shall find about some eight Lots 4 Ounces, and proceed with it the way following, as we shall by and by tell you.

Mix the Reliques or what is left, with two parts of *Regulus* of Antimony made with Iron, and melt it into a body: Wash off the *Regulus* and Tin from the Silver with Salt-peter, and you shall have your Silver not onely encreased by the *Jupiter*, but also indued with somewhat of a golden nature; as much as the Salts could maturate in so short a time, which is indeed a speedy Transmutation. But if you use *Mercury* of *Saturn*, there will not follow much amendment in so short a time. Yet nevertheless, that even the truth it self may even by this means be searcht out, there may be added a little Lead, and be boiled and reduced into *Scoria's*, in which there will remain a grain of Silver, which will give you information, how much melioration the saline Spirits are able to bestow in three or four hours space.

But this is not the right way of getting profit, for as much as it shows onely the possibility of the thing.

But if you would have any profit by such an Operation, you must get you a Cucurbit for this sublimation made of good and vitreous or glazefying Earth; and the sublimed *Mercury* must be taken forth of the Alembick, and be again added to the dry

matter lying in the bottom of the Cucurbit, and this Operation of subliming it must be so often repeated, till there ascend up no more, and that all abides fix with the Tin. Then is a stronger Fire to be put thereto, and the *Jupiter* and *Saturn* will be maturated by the Salt as we taught afore. And if now any be minded to take that same sublimated matter, as it ascended in the first sublimation, and would make it fix and constant (*per se*) in a Glass, he would get a Tincture that will in projection tinge with a white and red colour, but yet I never have as yet tried the latter of these. However I doubt not, but it may be done. For seeing that this sublimed matter, doth (though it be so volatile) penetrate the Plates of Copper, by three or four hours time cementation, and turns somewhat of the said Plates into the nature of Gold and Silver by graduation, how much more would it do, if being brought to a due fixity and constancy, it should be projected into some molten and flowing Metal? For that in such a white sublimate (principally in that which proceeds from *Lune*) there lies hid also an occult redness, and may be manifested by the Fire, this I say, mine Eyes have seen, and mine hands have felt, but have not as yet brought the Operation to its compleat end, by reason of various lets and want of time.

Farther, by such a sublimate *Mercury* may likewise be wrought various Transmutations, which I think not fit to divulge. It is in its nature fugacious and volatile, and yet notwithstanding doth it in process of time make all other volatile and fugacious matters, such as are Arsenick, Auripigment, Cobolt, and even the most flying of all, *viz.* common *Mercury*, fix and constant, which effect is to be attributed to the Salt onely. He that knows rightly to manage this Operation, will not labour in vain, but will be

rendred a partaker of great secrets, which thing I leave to the Sons of Art, as a Testament or Will.

But yet that I may kindle some little Torch for to guide the desirous Reader, and may make him more certain of a true Tincture, which this abject *Mercury* sublimate showing it self in a white colour hides in it, I have thought good, yet farther to add this following way.

Extract out of this sublimate a running *Mercury*, vivifying and separating it by apt and magnetick subjects; and evaporate a little portion or particle thereof, of about the bigness of a Pea, in a Silver Spoon; when 'tis all gone, you will find a purple Powder left in the Spoon. If you cast this Powder upon hot boiling Lead, you will find after its blowing off, a grain of Gold on the Test. The Spoon it self will bear the mark of a purple spot in that place, in which the *Mercury* went away in fume, and it cannot be blotted or rubbed out, because the *Mercury* hath deeply impressed the Tincture in the Spoon.

Now may some or other say unto me, whence did that little grain of Gold left on the Cupel, and that purple spot which tinged the Silver Spoon, proceed, came it from the Lead or from the Tin, or from the Silver, or out of the saline Spirits? The greatest part of Men will say it proceeded out of the Lead, Tin, or Silver. But I say, that it did indeed come out of the Lead, Tin or Silver, but that the Tincture adjoyned thereunto is for the most part the true Soul of Niter, which the *Mercury* took unto it self, and again left it and forsook it assoon as ever it was vexed or forced with the Fire. But I doubt not but that if such a *Mercury* impregnated with the Soul of Niter, were fixed and made constant in the Fire, it would afford an universal Tincture.

I confess I have tried many a time this Operation in small Experiments, which sometimes answered not my desires, what diligence soever I used thereabouts; but when I attempted it in a greater quantity it never succeeded. This thing seems to be posited in the will and pleasure onely of the Omnipotent God, who will not have those his so great Mysteries and Gifts profaned. I have indeed (like unto *Moses*) seen the promised Land, but yet I do not know whether or no God will bring me thither in this Life, that so I may enjoy those most precious Fruits.

And if God should not vouchsafe me that benefit, yet do I willingly rest content with this, that I have seen with mine Eyes, and felt with mine hands the truth of the Art more than once, which Art so many thousands of Men do so greedily gape after, but yet not with such good hap and success as to find it out or see it.

I have I say seen the truth, but not the Tincture brought to its end or perfection, but yet have I seen its beginning which makes me certainly assured so far, as that I dare to affirm, and confidently aver, that there is in nature such a thing as a true Tincture, and that it may by Gods blessing be prepared by an Artists hand. I have not yet had so much quiet and so much time as to undertake this so weighty a Work. Yet now I have a resolution to set aside all worldly cares, solicitudes and businesses, and to attempt and wait upon this kingly Work, and expect what the divine grace will bestow upon me. For we are to look for all good things from above, for else we labour in vain, whatsoever diligence we make use of.

These things I was willing to publish for the Assertion sake of the truth, and to prove that there was in nature a true Tincture, that so it may

evidently appear that Metals may be transmuted both universally and particularly. And if by some desperate Men or by a sudden and immature death (which chances God of his mercy graciously keep from me) all the *Mediums* or means of perfecting so great a Work, and finishing it should be cut off from me, yet notwithstanding the truth it self will be able to bear witness to my sayings when I am dead and gone. For I have by me even yet those Silver Plates tinged with Purple Spots, which can at all times witness the truth of those things I have here delivered. For it is an impossible thing that Silver should be tinged with a purple colour without a Tincture. If therefore there is to be found the truth in that white and fugacious sublimate, what I pray would be found in the fix and Fire-abiding red Tincture? Would it not be, that effects of far greater moment would be produced by such a Tincture. The Ancients therefore that desired firmness of health and a long life, bestowed such labours and sweats upon getting a true Medicine for humane and metallick Bodies, and some of them arrived to their wisht-for end, but the greatest part of them were deceived with vain labours, and frustrated of their conceived hopes.

If any Man did certainly know that there were in some places to be found mighty treasures of Gold, Pearls, and Precious Stones, and it were granted every one to search after them for his own proper advantage, what think you, he would be lazy and slow, and would not set himself to seek after them. But if any should so order his search that like a blind Man, he neither knows nor sees what it is he seeks after, or in what place it is to be sought by him, certainly such an one would labour in vain, and lose both his time, pains, and costs; and this usually

betides the greatest part of Men, for they spend their labours in vain in their search after this Work, because (like blind Men) they neither know what they are to seek, nor where. But yet 'tis credible that there would not such a multitude of them have stray'd from the truth, had but any one so clearly and perspicuously shown and pointed as it were with the Fingers at the place where the Treasure lyeth hidden, as I have now done.

And although the envious and lying Devil should oppose the truth even with his greatest power, and should most cruelly rage against it, yet notwithstanding he will not be able to shew us any one Man that hath produced and brought the truth forth to the light with greater perspicuity and evidence than *Glauber* hath.

I have therefore yet once more at present shown by a most evident demonstration even before the whole World, and have asserted it for a truth, that not onely the more imperfect Metals do admit of being really transmuted by Salt and Fire into the more perfect ones, but withall, that by them, [*viz.* Fire and Salt] a Tincture may be made.

And now let all mine enemies visible and invisible ones, open and secret ones, what name soever stiled by, come forth and publickly produce the true Transmutation of Metals, with a clearer and more conspicuous manifestation than I have here done. I acquiesce with what I have hitherto spoken; if God shall please I will divulge admirable things in my next third Century. In this little Treatise there are laid open onely four secrets, but yet so clearly and conspicuously that no body hath as yet manifested such and so eminent things with clearer and more perspicuous expressions.

For that first Instrument is clearly enough described, by the help of which, not onely a great plenty of all sharp Spirits may be prepared with very little costs and easie labour, and the four-fold use of these Spirits is able to bring most great profit to the Countrey.

1. All Gold, Silver, and Copper are thereby extracted out of the poorer sort of Oars which *Germany* abounds with every where, and that in a far easier manner than by fusion, and are so brought to a very gainfull improvement, to the great benefit of all *Germany*, the which hath never been hitherto done.

2. Of the said Spirits is made a Water-attracting Magnet, for the bettering of poorer Wines, that so they may keep good, and be the easilier transported out of one place into another, as I have signified in my second Century. It is a secret which offers gain both to the rich and poor, and may be prepared in great plenty.

3. The imperfect Metals are sundry ways bettered by those saline Spirits, of which may be made vast quantities as I have shown in this Work or Book, and this melioration my Writings do variously teach and treat of.

4. By the help of these fiery Spirits of Salts, preparable in mighty plenty, which is a thing commodiously to be done by the Instrument described in this Book, may the *Turks* who are the Enemies of the Christian World be resisted without any Bloud-shed. Concerning these fiery Waters, which being such a notable destruction on the Enemies, this is here to be noted, that immense quantities of them are easily gotten without any Distillation and with very little expences.

For if much be to be effected by them, it is necessarily requisite to have vast quantities of them in readiness, without which, no great matters are in this case to be accomplisht. But as concerning the manner of so greatly endammaging the *Turks* by these moist Waters I cannot so accurately describe the same here, as being a meer stranger to, and ignorant in military affairs. However I will briefly and in few words shaddow out, what way I think it may be done by, *viz.* to resist and mightily endamage the Enemies by them.

First of all, this is the nature and property of these moist Waters. As to outward view they are like Water, and may be handled or dealt with as other common Waters, but their inward virtue is nothing but a meer Fire. And because these moist Waters may be thrown not onely with the hands, but with greater Warlike Engines or Guns a good way off, by artificial Instruments prepared for that purpose; therefore is the use of them manifold, and as necessity requires may they be used several ways for the expulsion and overcoming of the Enemies. We will illustrate our meaning by an example. Suppose I am in a City or Castle besieged by the Enemies, and that I have by me some of those kind of Instruments which are accommodated to this use for the moist Fires. If now the Enemy should set upon the Trench, Wall, or a Bul-wark, and I were furnished with that defensive Water of mine, should stand behind the Wall or Bul-wark in that place which the Enemy sets upon, he could not possibly come at me; for those moist Fires may be cast by the said Instruments far without the City, like a fiery showr of Rain, or like a Cloud, which Rain being forced out of but one onely Instrument would dilate it self far and wide upon many hundreds of Men, and whatsoever it touched it

would hurt and burn like common natural Fire, and it would especially blind their sight, so that the Men would not be able to look up or see. If now the Enemies should make their attempt upon any place, and there should be shoured down upon them such a fiery Rain, and by hurting their Eyesight make them quite blind, how would they be able being blinded to get over the Walls or Bul-warks? I do believe that if they should have gotten over the Walls or Forts, and be made thus blind, they would be heartily glad if they could but get out again and recover their own party. But it would be better to beat them off, and blind them when they come with their Ladders to scale the Walls, than to permit them to approach any nearer. But yet if it should so happen that the Enemies had gotten even into the City it self, and there were some Houses in the principal places or streets in which the defendants may rally themselves and that such Houses were furnisht with such moist Fires, and that such fiery showers were shot out thence so blinding them that they durst not open their Eyes, what I pray would they be able to do, being blinded and clearly deprived of the use of their sight? Would they not throw away their Arms and solely mind the getting the Fire out of their Eyes, and yet it would hardly be so done in half a days time, nay if it should touch their Eyes in pretty quantity, it would scarse be quencht in two days time, and if they should go to wipe their Eyes with their hands, then would they make their torments much more intolerable, and would add more Fire to their Eyes, because their hands are likewise moistned and plagued with that continual shour. And now may not such unbidden Guests be overwhelmed and slain with Stones cast on them out of the adjoyning Houses? And may not one Single Woman with such a

little Instrument onely filled with these moist Fires defend her House against an hundred Soldiers. Verily in my opinion there may be made a better defence with such a little Instrument that one may carry about with him, than with ten or even an hundred Musquets. For 100 Musquets require 100 Men, all which when they have discharged their Guns once, and have slain some ten or twelve Men (and yet it is not wont usually to happen so in such cases neither) they need some time to load their Musquets again, if they would keep on shooting. But this Instrument may be used even by Women, two or three of whom will haply do more hurt to the Enemy than twenty or thirty, yea haply one hundred Men are able to do with their Musquets. And if the Women and other weak Men do but blind their Enemies, the armed Men may take them thus blinded Prisoners; that so not being killed but made Slaves, they may be set to Work and Till the Land, and this would be far more profitable than the killing of them would be. So then, may not an hundred Soldiers by the help of my Instruments defend any Fortress with greater and more certain defence than a thousand Men could otherwise do. Verily I believe they may. For these blinding Fires of mine, or fiery Clouds and Rain being adjoyned to other usual and customary military Weapons, will most mightily endamage the Enemy, nor will there need so many Soldiers, for the Citizens themselves may use the other [customary] Arms, and the Women and Children may use the Instruments, whereby they would haply defend themselves more strongly than if they committed their defence to chosen and registred Souldiers.

For these Instruments, (by which the moist Fires are driven far off upon the Enemies like fiery showers and Clouds of Rain, and that without

intermission, and as oft as ever need requires) although they be great, yet a few Men may govern or manage them, so that it will be impossible for the Enemies to effect any considerable enterprize in besieging any City. But it is needfull to place such Instruments that thus squirt forth Fire, behind the Walls and Bul-warks, that the Enemies great Ordinance may not hurt or destroy them. Verily I cannot so very accurately and compleatly show what [the best] way [is] of endamaging the Enemies by the help thereof, for this the practice it self will better shew us. I can furnish forth the Instruments themselves and the moist Fires belonging thereunto. I commend the use of them unto the Souldiers, who may learn to use them as they shall find good by experience I do again repeat what I have hitherto so often spoken, and I do affirm, that with one such Instrument may some thousands of Men be blinded in a moments time, and being blinded what I pray can they then do? If so be that others shall endeavour to come to help them and fetch them off, they may likewise be blinded, nor can they run away, and therefore must necessarily be taken Prisoners. And this in my judgment may be done in Hostile Invasions and Sieges.

But now whether or no there may be any use of such Instruments in Battailes and Conflicts with the Enemies, I do not well know, but that a City, Castle, or House may be defended by their means, and so drive off the Assailants, is a thing evident and undoubted. Should there be a thousand Enemies beset the House of some particular Citizen, yet must they depart if onely such a fiery Cloud or Rain (the Doors and Windows being shut) should be shoured down upon them. For so they would be rendred blind and not be able to see or find the Door, as it was in

Lots time, when his Enemies environed his House to have out those two Strangers, they were smitten with such blindness that they were constrained to leave the House, and it was permitted *Lot*, and his, to pass out of the same without any impediment. And is it not lawfull for us to smite our Capital Enemies the *Turks* with blindness, and to defend our selves, our Wives and Children?

God himself saith, I will encompass those that are mine, with a Wall of Fire, and defend them against their Enemies. Briefly, this invention of mine, of making such a fiery Mist or Rain, is an incomparable defence and safeguard, the like of which was never as yet known in the World. And now may any one easily conjecture what may be done offensively with this same invention. For example, suppose 'tis necessary to take such or such a place from the Enemy, but now there is not time enough left, nor are there Souldiers enough for the enterprize; and therefore some Stratagem must be used to become Masters of one of the Gates at least whereby the Souldiers may be let in.

And now in my judgment some Gate may be seized on and that easily by the help of these moist Fires of mine, and 'tis thus, let some Souldier or other fit for such a design, be taught the use of my Fire-spiting Instruments, and when he understands it, he may be clad in Countrey Habit, and so let him go to them upon the Guard, and in the Court of Guardhouses in which they be, let him shour in upon them a fiery, Eye-blinding, and forcibly hissing shour. [This done] how can the Guarders possibly resist those that come to the Gate and are ready to enter in? Nay more, the Souldier thus clad may have a Granadoe given him to carry in a Sack, which being filled with those

moist Fires, may of its own accord (without any benefit of Gun-powder) leap assunder and fill all the whole room with his blind making Dew, he may throw into those Watch-houses where they keep Guard, and so make all that are there present unfit to fight. And if so be there should be more of those Houses than one, the same Souldier may likewise have more such Granadoes given him, one of which he may throw into each House. Nay farther, if need be, and that you would have it fadge better and have it more certainly succeed, there may be sent several Souldiers with such Fire-breathing Granadoes to several Gates, to o'erwhelm the Watch-men and possess them. For the Watch-men suspecting no evil from one Countrey-man onely, will not cry out Arm, Arm, but let him in without any impediment. Such Fire-breathing Balls or Granadoes may be made of Iron, Copper or Earth, which however, properly are not Fires as long as they feel not the Air, and they then become Fires onely, when any one is so minded to have them such, breaking every thing in their reach like Gun-powder burning, and depriving all such as are present of their sight, and making them Sick. Granadoes made on this manner, and of about the bigness of a Mans Head, do not of their own accord conceive a flame without Air, nor do they flie assunder, or at all operate. But if you would that the Air be let in whereby they may operate, there must be a little Spicket or Tap to be drawn out of the Granadoe, that so the Air entring in may vivifie the Fire that lies in the Ball or Granadoe. Such a Granadoe being thrown into any Watch house, the Watch men will without doubt presently run and take it up and see what it should be, and what end it was thrown in there for; then as they all of them stand round and contemplate upon the novelty, if

any of them hap to draw out the Spicket, which without all question they would do, the Air gets in, and the Fire enkindles and breaks that Granadoe thus stuft with that venemous Fire all to pieces, and so will strike them all down together. And may not now the Souldiers in the mean time hasten and break in to that fenced place without any let, and become Masters of the Gate? Verily methinks it should succeed very well. I tell you my thoughts of the business, I never tried the thing it self nor do I ever desire to try. Such as have a desire to try it, and have occasion and opportunity of doing it, may more accurately contemplate thereupon, and so will they find what way they may most conveniently detriment their Enemies most of all by. I have laid the foundation, others must valiantly proceed on and bring the thing to a most usefull Issue. However I do not doubt but that the most part of Men that shall hear me say, that there may be such effects produced by these fiery Waters, that may equal the dreadfull Operations of Gun-powder, will mock at me, and judge it an impossible thing; nor will it be any thing strange they should, because they have not any knowledge of nature.

Before those dreadfull virtues of Gun-powder were known, certainly no body would have believed the same, had they heard it told, that it were a possible thing to hurry or throw such a great Ball of Iron, into so far a place with so little Powder. And now it is a thing so very common, that he that will not believe it will be laught at. Even so, those things I have here mentioned of moist Fires will seem extraordinarily wonderfull and absurd to the ignorant, untill they shall see with their Eyes, and feel with their hands, that the *Turks* shall even this very Summer feel it if God permit, and vouchsafe me health so long. If God

(I say) shall permit, which I would have you understand, as thus, *viz.* unless the wrath of God shall be so enkindled against the Christians, and shall therefore put a stop, and prevent the accrewing of any benefit, by any help how great soever it be. For when God pleaseth to punish any Countrey with deserved afflictions, certainly no Instruments of defence will at all help or do ought.

These things was I willing to declare at present, to demonstrate in what manner the Enemies power may by such Artificial moist Fires, and a peculiar kind of Granadoes, such things as never were as yet known in the World be broken. There are verily other far greater effects, and which exceed Mans belief, that may be effected by these my newly found out Fires; and such as are not to be written but to be revealed onely unto those that are truly well Willers to the common Weal, and who study how to destroy the Capital Enemy of all the Christian World. But thus much I add, that by these Artificial, Secret, and unknown burning and flame-conceiving Fires, far greater things may in my judgment be effected at any time whensoever one is minded, than by Gunpowder, for that it operates not afore it be enkindled with the Fire. But my Fires are enkindled and inflamed by the Air, and therefore must necessarily exeed Gun-powder in the production of greater effects, and this time will manifest.

Those common Granadoes being thrown into any City may be covered with wet Hides or Cloaths and be quenched, so as not at all to operate, but it cannot be so with my Instruments. And therefore it is not without cause that I prefer them afore Gunpowder.

'Tis not expedient to make any larger discourse concerning these matters, and to take up any more

room by revealing more. I could verily in a few words so disclose these things that every one mought be able palpably to feel, and visibly to see them, and so as that he would assuredly know that far greater things mought be effected by these my Fires than by Gun-powder. They may together with the Gun-powder use these my moist Fires as they think good and as need requires. And I do not question but that hereafter Wars will be waged after another manner than hath hitherto been done, and force must give place to Art. For Art doth sometimes overcome strength. We will illustrate the business by an example.

When any little weak Man Fights with a bigger and stronger than himself, and they have both of them like skill in the use of their Arms, the stronger over Masters the weaker and Conquers him. But now if the little Man be better skilled in the use of Weapons than the greater and stronger one is, he beats him and becomes the Victour. And when two are of equal Stature and Strength; they smite alike forcibly, and beat one another alike, just as your Laundresses that beat Cloaths with a wash Beetle, so do these lay on blows on each other with like measure. So among the Ancients did they fight Man to Man, and the strength of the blows prevailed. But when Gun-powder was found out, then a few could kill and put to flight a greater number than themselves.

And now again 'tis every where known, that Men now a days do again fight with equal hand, as 'twere, neither party having more help [by Art] than the other party hath: save that the stronger party doth for the most part get the Victory, so that the Wars in our time consist not in Art, but in the multitude and company of Men. Mean while I firmly hope that if

the use of my moist Fires be but known, there will be another kind of Warfare than now is, by fighting on equal Terms with blows as the Countrey fellows do, and whereby the stronger can overmaster and subdue the weaker. But now by the help of Art, the weaker may overcome the stronger. And if so be that Art and strength concur together they are wont to be most efficacious. *David* with his sling shewed the skilfulness of his Art, and subdued that great *Goliah*, who little expected such a mischance from such a little Shepherd. And like as *Goliah* mocked at *David* with his Sling, so perhaps will the *Turk* have us in derision, should we meet him with such Water-throwing Instruments. But even as that great *Goliah* was smitten down by a Stone of the Shepherd, so may the *Turk* be easily burnt and radically rooted out by those moist Fires, if the Christians will themselves.

But some or other may here object and say, suppose some perfidious Christian should happen to flie to the *Turks*, and put such Weapons into their hands, to use against the Christians agen, what shall we do then? [I answer,] such [a mischief] may be prevented by an accurate diligent wariness, that these secrets be not revealed to every body, but to such onely as are known, and that have possessions, Wives, and Children: for such will hardly be allured or corrupted with any reward. Besides too, the vulgar will not be so easily apprehensive of all things hereto requisite, seeing the Art consists not barely in one or two, but in many things [or circumstances.] It cannot therefore be that such inventions should so easily fall into the Enemies hands, and that for several causes which I forbear to reckon up here. Nay more, if necessity should require there mought (by accurate meditation) a farther inquisition be

made, whereby more such inventions mought be found out. For this may easily be effected by Men of a quick piercing Wit, *viz.* by their diligent search to add to what is found out and to better the same, for 'twill be a facile thing to do. For nature being so most exceedingly richly stored can never at any time be thoroughly found out. And therefore even I my self do hope in some short time greatly to augment [or meliorate] the said Inventions of mine. If God vouchsafe me life, there shall be even yet produced by me to light wonderfull things, which will miraculously promote the safety and happiness of my Countrey, and especially if I shall but find amongst Men a thankfull remembrance thereof.

Moreover, I doubt not but that abundance of Men will wonder if they shall see these my newly invented Warlike Instruments to be published in Print, which is a thing that I would never do, for I have resolved to make such onely partakers of the knowledge of the same, as stand in need thereof.

But because I have conferred with one or two (whom I thought to have born me a loving and friendly mind) about these things, and spake to them too openly about the very business it self, they got some part of the Art it self, and saw the very Instruments in the Workmens hands whom I had taken order with about making them, and without doubt perswaded themselves that they had the full knowledge of the whole Art. Presently upon this they were become invisible and withdrew themselves, insomuch that I suspect that those perfidious Men have repaired to the Courts of some great Men, to offer and sell these my inventions as if they were their own. Now then to meet with such treacherous perfidiousness, I thought good to publish openly

somewhat concerning these matters, that so every one may know that whatever Men shall sell such secrets as their own, they were not invented by them but by me, and they have fraudulently stolen them from me. But I except those here, to whom I have revealed them to this intent, that, *viz.* they may make use of them against the *Turk*.

And because I can methinks prophetically as it were conjecture that these my newly invented military Instruments will be desired and sought after by a great many both high and low, I judged it a thing worth the while, to take care for the getting some of those same Instruments, and also those moist Fires thereunto appertaining to be prepared, and sent into those places, where they may detriment or annoy the *Turks*. For without doubt there may be far stronger resistance made with these newly invented Instruments against those our Capital Enemies, than can ever be done with Gun-powder. For Gun-powder is never wont to operate afore it be kindled with the Fire, which kindling and inflamation Water will hinder, and now my moist Fires are not at all impeded thereby. And upon this account it is a thing altogether possible that a fiery Globe [or Granadoe] may be as well emitted [or be as forcible] out of the deep Waters with [or by] them, as it may with Gun-powder out of the Water, the which seems indeed incredible, but yet is very easie to him that is endued with the knowledge of these things.

There yet rest a few admonitions to be given, *viz.* that no body pass his sentence upon these my secrets here disclosed, with a prejudiced and forestalled judgment, unless he has a mind to slur himself with an infamous mark, but let him have patience, till he of his own knowledge perceive the whole Basis of the

business. Many things there be that lie as yet hidden, which (as Prophesies tell us) must be manifested before the Worlds end. This time draws nearer and nearer, though so few believe it. For my part I am verily of this Opinion, that there is such a wonderfull time at hand, the like of which hath neither been seen or heard of from the time of the Floud even to these our days. I pray God to Defend the Pious, and to Convert the Wicked, *Amen*.

The End of the First Part.

THE
SECOND PART
OF
GLAUBER'S
WORKS.

The First

CENTURY,

OR

Wealthy Store-House of Treasures.

BEING

A General *Appendix* to all his hitherto-published Writings.

The which doth not onely illustrate all obscure places, as well in his Philosophical and Medicinal as Chymical Writings, and explain those hard places to be understood; but also do so abundantly supply those which are defective, that the learned and the unlearned, the highest and the lowest, and more, the meanest Workmen and Husbandmen, may sufficiently be able to comprehend that *Glauber* hath in all his Writings,

written the pure and simple Truth, and hath again brought to light the most noble Art of Alchymy which hath so long lain hid in darkness hitherto; and hath discovered it for the common good of Mankind.

***LONDON*, Printed in the Year MDCLXXXIX.**

THE

PREFACE.

Courteous Reader,

That every promise becomes a debt, is reported by a common Proverb or By-word, and therefore to stand to ones word or promise, is a thing which procures a great Ornament or grace no less to Juniors *than to* Seniors. *Since therefore in my Writings I have ingaged my Faith or Credit through the promising of some little Works, and yet have not been able, by reason of the scantiness of time, hitherto to satisfie the expectation and desire of very many, by publishing of the same; yea since greater Discommodities and Impediments being cast in my way, do hinder me from day to day whereby I cannot write more things, although I have nothing more in my desires than that in standing to my promise, I may acquit my credit, and set forth the said little Works; to wit, my Vegetable Work, my Work of* Saturn*, my Book of*

Dialogues or Discourse, the fourth part of my Spagyrical Pharmacopœa *or Chymical Dispensatory, and my admirable little Book, of the concentring of the Heaven and Earth: truly they being Treatises containing most excellent Arcanums or Secrets, and the most worthy ones whereof Men can be made partakers, notwithstanding I am of necessity destitute of time for the writing of any Treatise peculiarly, and for that cause I am constrained to insist in a nearer path, and for the sake of promoting the publick good, to send forth the said Treatises in publick by a less labour and trouble. The present Treatise notified with the Title of an universal Chest or Cabinet full of Riches, or of a general Appendix of all my Writings hitherto exposed to the publick view performs this, whereby all things which have been either the more briefly and obscurely spoken in them are with a more clear or perspicuous illustration explained, or things that have been wholly omitted are supplied, and by the same endeavour the promised Treatises are added, yet not in that order wherein they ought otherwise to be written down, and the which order here to be observed, would administer very much trouble; but wherein all the secrets have in process of time been made known unto me, and committed to Paper. But it is free for any one to add according to his own Judgment, Medicinal Secrets unto Medicinal ones, Mineral Secrets unto Mineral ones, Chymical Secrets unto Chymical ones, if it shall so please him, and time shall also permit the same, which it in no wise permitteth unto me, every one that acquiesceth and is content with these things may consider, if a certain Cook should set a Dish on the Table filled with the best Meats, as being destitute of time, to put every sort of Meat in a several Dish, whether he could of right be angry with him, or by whisperingly prating, he could dare to say, he was to be blamed as being not skilfull in the affairs of the Kitchin, because*

collecting so many delicate and such dainty Meats into one Dish, and daring to set them on the Table? I suppose not any one could of right complain of such a deed of any Cook; the Cook, desiring to have it taken in good part, such Meats as he had, such he sets before them; he that refuseth to take of them, may use his own liberty, and may let those Meats alone, which he is not compelled to receive, even as the Cook also may be constrained by none in preparing of the same according to his own will or judgment.

Whatsoever Meat doth not please the Pallate of one, yet will not be ingratefull to the Pallate of another, but on the contrary gratefull, seeing one Food is wont to savour or relish this Man, and another the other, neither is he inordinately affected with the disdain of confused Meats, who taketh of those which relish him, and leaveth the rest for others.

Let every one that blameth these Writings do the same, not in hastily taking them in evil part, but in friendly and courteously excusing me that I have not sent them abroad in a more harmonious order.

They are like unto a certain true and great Cabinet or Chest, filled with very many excellent Secrets, being reduced into my knowledge through a successive diligent search of thirty years and so collected into one heap, that they might either be conserved for my own or at some time be made of publick use or service: out of this Chest every one shall be able to exhaust those Arcanums *and* Secrets*, which shall please him or serve his uses.*

As to what concerns my self, because I daily behold sometimes this Man, sometimes that Man being snatched away by death, to be carried forth and committed to the Earth, I may easily conclude rationally with my self, that those changes or chances will in a short time happen also unto me; I should commit a very grievous offence or

errour, that so many costs, labours and troubles, of so many and so great Secrets being consumed in vain, I should carry them away with me under ground, and not bestow them for a common good: I shall here perform the office of a good House-holder, or skilfull House-keeper or Steward, who after that he hath made abundant of Provision for Winter-cloathing for himself, his Wife, Children and whole Family, if he hath as yet plenty of Linnen and Woollen Cloth remaining, he doth not cast them away, but rather casts them together into a Chest, so long to be kept, untill he shall obtain an occasion of administring them for the use of his Neighbour. In the name of the Lord therefore, in making a beginning with the opening of my Chest of Treasures, I will empty it out by little and little by degrees, and will offer it for a common use, that out of so many Treasures, every one may convert unto his own use, what things he shall judge to be profitable unto him; to wit, a Physician Medicinal things, and a Chymist Chymical things, even as every one shall discern any thing to be fit for his own use, every one of what rank soever shall find those things wherewith he might be content, so indeed that whatsoever he shall not meet withall in the first, second, or third Century may be found in the rest, for which things sake, if ten Centuries shall not be sufficient, I will adjoyn other ten or more, that so I may remove from me all those cares, and carefulnesses wherewith the custody of so great Treasures hath importuned and affected me for so many years. Like unto a travelling Woman, who with the greatest desire expecteth the hour of her delivery, and who desireth the beholding of her Fruit, do I desire that time wherein all things shall be printed in Letters. The Almighty God bestow on me so much presence of mind, health, and strength, and prolong my Life so far, that I may finish it to his Honour, and the Succour, Comfort

and Profit of all Mankind. Amen.

THE FIRST CENTURY: OR *GLAUBER'S* Wealthy Store-House of Treasures.

PART II.

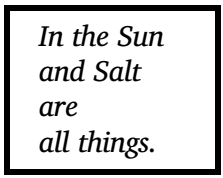
In the Name of the most Holy Trinity I begin to write the First Century of my General Appendix*, or an Exposition of all my Writings hitherto set forth.*

I. *Concerning Fire and Salt, and what Alchymy is.*

Alchymy is a Science, and Art of destroying, of purging immature or unripe and impure Metals, by Fire and Salt, and by a singular Artifice, of converting the more pure part into a better form and kind, according to the words of *Paracelsus*, who saith, *Every Something is to be converted into Nothing, and every Nothing into Something.* Also Corruption renders that which is good perfect, the which is to be equally understood of particular and universal Operations.

Nevertheless it is not of necessity that I should here tediously treat of a particular Transmutation of Metals by Fire and Salt, because that hath been already long since performed in the second part of the Miracle of the World, and also in the fifth part of the prosperity of *Germany*.

A Square within a Circle.



II. *A Demonstration whereby it is proved that Fire and Salt are most noble Creatures of God, and that in Fire there lies hid the purest Salt, and in Salt a most efficacious Fire.*

That Fire and Salt are most noble Creatures of God I have evidently enough demonstrated in my little work concerning the nature of Salts. But that there is a subtile saltish spirit in any fire, and that between the heat of the Sun, and of our Kitchin fire, as to their saltish spirit, a great difference doth interpose is sufficiently and over sufficiently known. But to comprehend or lay hold of, to concenter such a pure saltish spirit of *Sol*, to render it corporal, palpable or perceivable, and visible, remains hidden and unknown to us by reason of our sins; because God reserves so great mysteries for his own alone, of whom he is honoured and feared: for God himself useth no better similitude than the fire, whereunto the Ancients exhibited divine honour, and by the help of the same, perfected all their Sacrifices: So among the *Caldeans*, Fire, and God are called by one and the same name of *Esch*: and among the *Heathens*,

the chief Philosophers, yea *Hermes* himself thought the Sun to be a God, and worshipped it for a God. These things are found expressed by *Mutius* concerning the nature of Gods, and therefore those things are not necessary which may be here repeated. Yet that is well to be noted, that God hath always appeared to his Saints under the shew of fire, and hath talked with them out of it, it being that which is full of the greatest mysteries, yet observed but by a few, as in a peculiar little work concerning the concentration of the Heaven and the Earth I will more plainly and fully declare. I affirm therefore, that it can scarce be, that the admirable, yea incredible nature of fire should be described without the revelatian of the highest or greatest mysteries of God. Therefore it is better that such Secrets are passed by in silence, than that precious pearls should be cast before Swine, who are wont to receive them with laughter, and proclaim that they are nothing but the mere sophistries of triflers, even as is evidently manifest from the description of *J. H. S.* of the Philosophers Stone, wherein Nature, he saith, makes not use of Glasses, Vessels, Fire, Salt, Urine, and the like in the bowels of the Earth; and the universal *Elixir* may very fitly be prepared by him, who also hath not handled any Chymical Labours, or was never busied about Fire or Salt: Let it shame the man of such stinking lies, wherewith he endeavours to cover his own ignorance, I on the contrary affirm, that all those that know not how to handle Fire and Salt, do in very deed know nothing, but do give credit unto those things only which they hear, or read in others writings, and also for that cause are unworthy of the name and title of true Philosophers; for true Philosophy is to be thoroughly or perfectly learned by the help of Fire and Salt alone, the which

God willing shall be more evidently demonstrated.

III. *It is moreover demonstrated, that in all Salts an admirable Fire doth lurk as being laid up therein, through the indeavour whereof very many admirable things may be perfected as well in Medicine as in Alchymy: and also that it may be altogether performed, that out of Vitriol the Stone of the ancient Wise men, out of Salt Peter a spiritual Gold, and an excellent yellow tincture, and out of common Salt the true Pearl of the Philosophers may be prepared.*

In all Salts, that a most potent Fire doth lurk as being laid up therein, those have best known who have the labours of the fire thoroughly viewed and certainly known. For through the efficacy and operation hereof, salts are reduced unto a fiery force, or power, or unto a moist fire, out of which they before arose, after the laying down of their earthliness, yet one salt draws out one fire far unlike to the fire of another, so that this is volatile, the other is fixed, and remaining constant in the fire; another is partly volatile and partly fixed, even as the operation shall procure this or the other property unto them, yet all such fiery salts may by the benefit of Art be concentred, and made more efficacious than they were made by some one distillation. For example sake. If any one beholdeth Vitriol, and considers of the nature thereof, he shall in very deed certainly find that by the help of, a strong fire, there may be allured or extracted out of it that which was in the beginning, to wit, a fiery spirit, which by the aid of external fire, being reduced into a narrow Central room, or Con-centration, draws out that internal fire, uncloathing it self of, or displaying so great virtues, that it reduceth into a Coal all things which it

moisteneth or encompasseth, even like as if it had been burnt up by common Kitchin fire, or by Glasses receiving the Sun-beams and burning up all things that are objected against it. Concerning these fiery salts, and the preparation and use of them, I being here to deliver a few things, I will take my beginning from the fire of Vitriol, and the preparation of the same, the various and manifold use whereof shall be afterwards explained in its own place.

IV. *Of the Preparation of the Fire of Vitriol.*

Retorts made of the best earth do draw out the fire of Vitriol by distillation after this manner following.

Common Vitriol is calcined in earthen pots unto a redness, and reduced into a powder, it is put into an earthen Retort, and placed in a Furnace, and a great vessel adjoyned to the neck of the Retort, which is to receive the Spirits going forth; the fire is kindled by degrees, and is gradually increased untill the Retort be brightly red hot, in which degree of fire it is so long to be urged untill no white Clouds or little vapoury Mists do any longer appear. This operation is perfected in 24 hours space at the most. But if the Retort shall be very large all the Oyl cannot be extracted in the space of 24 hours, but will require a longer time for the operation, which experience it self will determine: after all the Spirits are distilled off and settled to the bottom of the Receiver, the clay luting which joyned the Receiver to the neck of the Retort is to be mollified with a wet cloth put round about it, and the Receiver taken off, and the spirits poured out of it into a glass body well coated with Clay, the which (having an Alembick put on) is to be set in sand, that the volatile Spirit may slowly and gently be drawn off, and kept for its use afterwards

to be taught. Also afterwards the phlegm is to be drawn off, and reserved for its own uses, because it hath its own peculiar virtues. At length also the last spirit is to be received in a peculiar vessel, the which, after that it hath ceased, and fiery drops do follow, the fire is (by degrees) to be removed, and when the sand is cold, the gourd is to be taken out, in which (the Alembick or head being taken away) thou shalt find a fiery Oyl of a black or somewhat reddish colour, the which is again to be rectified in an open fire in a Retort well coated, that it may be rendred more fiery and clear.

By this oyl admirable things, and those not only profitable for Physicians but also for Chymists, and other Artificers, are perfected as we shall straitway see.

There are indeed other ways or means also by which this oyl is attained, but this afore taught is the easiest of all, although it require the more time. But if any one stand in need of a greater quantity of the same, he may procure those greater Cans prepared of the best Earth, they being so joyned to each other, that the uppermost being placed on the fire, the rest might be placed without the fire, so that the lowermost may receive the oyl going out by descent.

V. *A proof whether this Oyl of Vitriol be well prepared and strong, and fit enough for that operation of which we here treat.*

Let down a quill or some small piece of wood into the Oyl, the which, when thou hast left in it for some small time, draw it out; if it shall be burnt unto a Coal the oyl is well prepared, but if not, it is a sign that somewhat of moisture is as yet therein, which is again to be expelled by fire.

VI. *Another tryal or experiment.*

Dip in the oyl a piece of woollen, linnen, or which is better a piece of cotton cloth extended to the breadth of a finger, and pour on the same being taken out and laid down some drops of the spirit or oyl of Turpentine, the which if being kindled they shall conceive a flame it is a sign that the oyl was well prepared.

VII. *Another further Proof.*

Pour into some little glass some small quantity of spirit of wine wanting all phlegm, and pour on the same some drops of this oyl by little and little; and if the spirit of wine kindle and burn all away the oyl is prepared after a due manner.

NB. I admonish that every one doth warily handle this operation: for in these two fires, to wit, saltish and sulphureous ones, there is great virtue hidden, the which seems probable but to a few, if it should be manifested unto them, neither that have I consulted or decreed that it should be made known to very many. These few particulars do sufficiently teach after what sort such fires are to be used in Medicine, Alchymy and other Arts; but these experiments are sufficient.

VIII. *Concerning the use of this fire of Vitriol in Medicine.*

The use of this fire, as also of the volatile spirit of the same, and of its flegm, thou shalt find described in the second part of my Furnaces, and among other Authours; so that the repetition thereof is here superfluous, this is onely to be known that this fire being onely besmeared or anointed with a feather on

all uncurable and Cancerous or eating Ulcers, kills the Poyson, and causeth that such Ulcers do very easily admit of cure, if so be the Escharre be but first removed by the applying some ointment or emplaister which cures adustion or burning. For this oyl burns up all wild or forreign flesh, and that which (as proud) lifts up it self with an abounding poyson, like unto a certain bright burning Iron, and separates all evil and hurtfull flesh from the good and sound flesh.

IX. *Of the general use of this Oyl in Alchymy.*

By this mineral fire, all kind of Transmutations of things are perfected, but particularly it exalteth some of the more base metals into a higher degree, and makes them more constant, of which more shall be said in the following Chapters or Treatises.

In the general, some Vegetables, Animal and Mineral subjects, may by the operation of this Oyl be reduced into fixt Medicines, and indeed far more commodiously than by the common fire of Wood or Coals. And moreover which is a far greater thing in this very oyl a fiery Tincture is hidden, and is manifested by the benefit of Art, as Fryer *Basilius*, and other Philosophers do affirm.

X. *Of the use of this fire in other Arts.*

By the virtues of this invisible, and yet essential fire, all sorts of most profitable matters are performed, the which notwithstanding is not here safe for me to describe, but I am constrained to refer it till another time, it onely in this place seems worthy my labour, briefly to shew that this fire performs all those things which the fire of Coals is otherwise wont to effect.

Truly it is a fire, but it shineth not like the fire of Wood or Coals: But he that will have it to shine, he must needs add unto it a subtile or fine Sulphur, that he may extract or allure forth of it a visible fire.

This fire being defended against the entrance of the Air, remains occult for many thousands of years, and doth not manifest it self, unless any one make it manifest.

Truly it is an admirable fire, and most fit for the effecting of many incredible things, whereof we have spoken many things sufficient for this time.

XI. *An evident demonstration of such a fire lying hid even in the Salt of the Kitchin, and that known to every one.*

After that *Plato* and many other Philosophers took notice that nothing endowed with life did consist without Salt, and that dead Carcasses themselves were preserved for a long time from putrefaction by the virtues of the same; they thought and wrote that a certain divine thing lay hid in it. But after what sort this divine and hidden thing is to be made visible, they have not taught. But without doubt, those most wise Philosophers would by this word shew and denote something of a singular excellency.

Because therefore God himself is a fire, and hath never appeared to his Saints in any other shape but that of fire, and besides also all Salts are generated in the moist bowels of the earth from an Astral fire, and on the contrary, a true fire may by the operation of Art be extracted and rendred palpable and visible out of all Salts, it being that which without doubt lay not hid unto them, therefore it is also very likely that those Philosophers have not without a cause of great

moment written that a certain Divine or fiery Being did secretly lurk in Salt.

But that they have intimated not any thing to be better, or more noble than that fiery and saltish Spirit may be foreseen by an easie conjecture; for if a certain divine thing shall lie hid in Salt as they write, it shall of necessity follow that that divine spark being freed from all its earthly bonds should be far superiour to all earthly things in beauty, virtues, efficacy and power; and that next to the eternal God himself it should remain the chiefest and most precious Pearl in the World.

But who shall teach us the manner of separating so precious a Pearl out of the common and Kitchin Salt? none but God alone, or some good friend; who can make his friend a partaker of the knowledge received from God?

But since that very few mortals do seek, love, fear and honour God with sincere hearts, but do much rather cleave fast unto the frail and unjust Mammon, and attribute divine honour unto the same; its no wonder that God doth reserve those things to himself, or at least doth sparingly bestow on us those things which he abundantly supplyed the Ancients withall from his own bountifull hand: And moreover the same omnipotent Creatour enlightning some fit subject, with a certain spark of nature, grants unto him also so much wit that he knows that by a due silence he is to beware of this wicked dreg or dross of the World. Whence it is no wonder that the light of nature is at this day made known to so few mortals.

But before I treat in many particulars of that precious Pearl of Salt, it seems altogether necessary for me, first to shew the manner and reason of

extracting that fire out of Kitchin Salt; the separation whereof can be perfected in no other respect than through the violence of common fire, to wit, whenas the Salt being mixt with a certain earthly matter that it cannot flow, is urged in a retort with a most strong fire, that the more pure part of the Salt, which is nothing else but a sharp spirit, may depart into the Receiver joyned to the Retort, in which sharp and sweet spirit a most efficacious fire lurketh which in manner following is to be extracted and concentred.

XII. *Of the preparation of the fire of Salt.*

Take of this acid or sharp spirit of Salt, rectifie it out of a Glass Retort in sand; the flegm will come over first, which was put in the receiving Vessel in the first Distillation to condense or collect the spirits the more commodiously. After that all the flegm is come off, and acid drops begin to come, remove or change your Receiver, and take your spirits therein; continue the Distillation so long untill all the spirits be come forth, it being indowed with an acid sweetness, is an effecter of very many operations, which doth bring much profit both in Medicine and Alchymy, as is manifest out of diverse of my writings, and especially out of the 2d. part of my Furnaces, and the comfort of Mariners.

In this sweet and sharp spirit like Wine there is an infernal fire hidden, which doth equally like Coals burn up all things put into it, like as the fire of wood and coals doth Vegetables and Animals, and it reduceth all things which common fire doth, by calcining them into ashes, such as are immature metals, tin, lead and the like, which when they are put into it, it burns them up by calcining them into white ashes.

XIII. *A Concentrating the rectified Spirit of Salt into a moist and cold Fire.*

Every Spirit of Salt consisteth of two things, to wit, Fire and Water, which water the fire doth so firmly co-knit to it self, that it cannot be wholly separated by any distillation or rectifying; but it always adheres to the fire, how often soever it be rectified or distilled: if any one therefore desireth by rectifying to separate them he must of necessity put immature metal-like subjects to the Spirit of Salt, the which, by how much the more immature or unripe they are, by so much they render the spirit of salt the purer; such are *Lapis Calaminaris*, *Zink*, and *Iron*, which by reason of their moist and attracting nature, do draw to them that invisible fire out of the spirit of salt, as it were that agent whereof (as to their maturity or perfection) they are necessarily destitute, and without which fiery agent, a metallick kind of body is able to attain unto no perfection in the earth.

Such metallick subjects therefore, the spirit of salt, they being put into it, assaulteth, and as much as it can dissolves them. This solution being distilled out of a glass retort by sand, with the more gentle fire, sends forth nothing but a meer and unsavoury phlegm, the fiery essence it self remaining with the mineral in the Retort, the which if it be more and more urged, and the fire more increased, that it may become plainly burning bright, then that mineral cannot longer retain the fire of the salt, but dismisseth it, which descending into the receiving vessel, is condensed into a thick and fiery oyl, which is afterwards to be kept in strong and well stopt glasses, because it fumes without intermission, and desires to return into the air, as it were its Chaos from whence it came forth.

This fire is the operator of great effects in Alchymy and Medicine, of which effects very few have known how to discourse. But it hath far different properties and qualities from that which is extracted out of Vitriol, whereof it shall be afterwards treated.

And although through the help of this fire, incredible things may be performed as well by Chymists as Physicians, and other Artificers; yet it is a consuming, destroying, and also a ripening fire; neither hath it the least of the most noble Pearl with it whereof we have made mention above, and the which in this preparation is converted into such a fire.

That Pearl, if it should be extracted or allured out of Salt, in my simple opinion it were to be extracted not by the benefit of the fire, but through the endeavour of metallick and attracting subjects.

But although I do not profess my self to be so skilfull a Master, and do not arrogate to my self the knowledge of so precious a pearl, yet I cannot but bewray that small little spark of Nature which God hath granted unto me, that so every one may have a clear knowledge and sight of what admirable mysteries Salt doth hide in its own vile body.

XIV. *The manner whereby that most precious Pearl of Salt may at least wise in some respect be rendred conspicuous or apparent.*

Even as I have admonished in my foregoing writings, that the powers, colours, and virtues of all Vegetables, Animals, and Minerals are found concentred in Fire and Salt, so also I now affirm and assert the same thing that by Salt through the benefit of Fire, all Vegetables, Animals, and Metals, may in

their own species, nature and properties be increased and propagated into an infinity. So that we have the seeds of them.

For example sake, I prepare Kitchin Salt by the fire, that its tartness being lost, it puts on the nature of an Alcali or Lixivial Salt, I mix some parts thereof with some barren earth, or with naked sand, the which I moisten with water, in these I sow the seeds of vegetables, that they may be nourished by that Salt and may grow, which in thus growing do obtain their own proper figures, virtues and colours, they appear green, yellow and red, sky-coloured, purple coloured, and white, *&c.* and have a sweet, sour, sharp, bitter, savour, even as God hath bestowed on every particular kind its own proper nature, which operation proceeds from this one onely Salt, and the fiery beams of the Sun being tempered with air.

When therefore Beasts are fed with these Herbs growing, and receiving nourishment from the Salt, they are of necessity also nourished and increased by the same; even as also the same Herbs growing from the same Salt do supply nourishment and increase themselves.

But if any one could obtain the true seed of Gold, and increase that seed by the help of Salt and Fire; he might (without doubt) obtain great plenty of Gold, but God will not have it that the tail of the Goat should be as long as the Cows, the which being lifted up with too much pride, would strike out her own eyes with her too long tail.

If therefore all things and Gold it self, as also Silver, Pearls, and precious Stones, are after an invisible and occult manner hidden in Salt, and may by the help of art and nature be rendred palpable and visible; why also might it not come to pass that

the most excellent Medicine and most precious Pearl of the wise men might be allured forth out of the same Salt? Truly common Pearls are bred out of Salt waters, wherein if the first matter of Pearls were not, after what manner or sort should they bewray themselves out of the same? Therefore that it may evidently be made manifest, that by the operation of art, also Pearls may be extracted out of Salt which do far excell those Pearls, which by fishing are drawn out of the depth of the Sea, in beauty, virtue, efficacy and excellency; I will prescribe as much indeed as hath been granted unto me, for demonstrating the possibility of the thing, a certain manner whereby every one shall be able to take to him a firm and sure foundation of weighing or considering of the matter more exactly.

XV. *An operation of alluring forth a Philosophical Pearl out of Salt.*

Dissolve thou in common water, as much of common Salt as thou wilt, by how much the greater plenty thou shalt take, by so much the more thou shalt obtain.

In like manner dissolve in *aq. fort.* one or two Ounces of Silver, pour this solution of *Lune* on the dissolved Salt, and stir both the dissolutions up and down divers times, that it may become white and like unto Milk. For Silver cannot well indure the Salt, but departing from it is precipitated to the bottom, and there resides, in the form of a snow-like Powder, which by the effusion or pouring off the water is to be separated and dried.

This silver powder hath extracted a spiritual and philosophical gold, or the said precious Pearl out of the Salt Water. Because *Diana* hath known no less

how to fish Pearls in the Salt Sea, than to hunt wild Beasts in the green Woods: But that Pearl is made corporal and visible in manner following.

XVI. *How the Pearl being attained is made visible.*

It is to be noted that that silver powder being thus by it self, and without an admixture of other fixxed Salts, doth very hardly by fusion return into its former form of silver, but that it flows like Salt, and pierceth any vessel whatsoever, yea doth depart into a smoak. For the spirits of the Salt do render the silver so fluid and volatile; that it is made altogether mercurial; and therefore its more tender and noble part may be separated from its more gross part by distillation, if this could be done by glassen, or earthen, or metallick vessels.

When this mercury of *Lune* is melted in an open crucible, it vanisheth into smoak. It being put into a Glass Retort, refuseth to yield to the fire, the which being too much increased makes the glass to melt, and destroys the glass together with the silver. If earthen vessels be used, the same mercury pierceth the same unhurt like oyled Leather, when it departs, the Salts also depart into smoak, and do leave little grains of silver adhering to the vessel, whereof in this respect there is made a loss, which renders the sublimation void.

Of Iron vessels also here is no use, because of the Salts that are admixed with the silver rising up against the Iron, they dismiss the silver reduced to its ancient body, and besides a little spirit of salt they send forth nothing, so that no separation is made, but the pure and impure do remain co-mixt.

For the sake of avoiding those discommodities I

have tried many ways and manners in vain, and at length I took notice, that if such a matter be added to the most penetrating mercury of *Lune*, which may so hinder its efficacy of solving and co-melting, that it may be changed into a porous lump, than that, through the benefit of fire there might be an easie separation thereof, which without this help doth most difficultly exist.

In the name of the Lord, therefore adjoyn thou unto thy fishing Net; that is, unto the mercury of *Lune*, such a matter in due weight and measure which admits not of melting, and which suffers not the mercury of *Lune* to conflux, or melt together. Such are wooden Coals being reduced into a fine powder, with the which being mixt with the mercury of *Lune*, thou shalt fill thy distilling vessel, whether it be earth, or iron, or glass which is the best of all, even unto the half part, and shall set it in the fire, the which is to be gently increased by degrees, untill the glass become burning bright, keep the vessel so long in this heat untill all the spirits are departed, which ceasing, thou shalt take away the vessel being cold, in which thou wilt find the remainder of the mercury which did not ascend, reduced into a corporal or imbodyed silver, or at least wise such, to which adding a little borace is easily reduced into silver, the which doth contain somewhat of gold; but keep thou that subtile and pure matter which ascended in distillation as a precious treasure, and meditate after what sort, or by what means thou mayst be able to fix this precious Pearl, and convert it into a fusible, or flowable, and piercing stone.

But in what respect, or in what manner this thing is to be done, in very deed I cannot tell, because I am he who have not hitherto had leisure, nor time of

perfecting that thing, and therefore I have been willing here to shew onely these things which I have seen with my eyes, and handled with my hands.

Another shall be able by his own judgment to make tryal, and to see what God will bestow upon him, I have shewn in stead of the mercurial Statue or Image, that which shall suffice at present.

XVII. *A more easie manner of obtaining a Philosophical Pearl.*

If thou shalt be desirous of obtaining a Philosophical Pearl after a more easie manner, thou must of necessity thus operate.

Unto half a Loton, *i. e.* two drams of the mercury of *Lune*, add a little of the powder of Coals, and put the conjoyned matters into a small glass, the which set in a crucible encompassed with sand unto that height which the matter in the glass it self shall determine. On the mouth of the glass put a small piece of some glass that it may be well covered, and so place thou a less crucible with the upside downward upon that little glass, that its (top) utmost and highest bound being overwhelmed with the said sand may drive away all air from that little glass.

Set that crucible being in this manner co-fitted, and containing the little glass shut up between them in live Coals of Wood, and make them bright burning hot, that that may remain fired for a quarter of an hours space, then let them cool, and thou shalt find a little lifted up by sublimation, the rest being melted by borace, will afford a silver impregnated with gold, yet without gain, the which demonstrateth onely in the space of half an hour, what may be done: but what gain may be obtained by this very operation

shall hereafter be shewn.

Furthermore it is here to be seen how most beautifull a Pearl doth bewray it self, although very little of it come forth, because in this labour no small part thereof flies away into the air, and sheweth onely its colours alone in the glass, far more beautifull than gold, silver, and precious stones; if any one shall rightly operate, neither shall there be any Painter who shall express it by imitating and painting.

For this time take what hath been spoken in right and good part, and immediately weigh thou so great a thing the more exactly, pray, labour, seek, and in seeking thou shalt find such things which thou couldst never before have believed.

The Brethren of ignorance, my enemies, will here object against me, and say, that these most elegant colours have drawn their original from the silver: unto those I briefly answer, That they were indeed extracted out of the Salt by the help of the silver, but that they do not (*per se*) or by themselves pertain to the silver, for if they were of the silver they would also be solved by *aq. fortis*, the which, since it is not done, they are not silver, but the meer *Anima* or Soul of the salt. That this thing may be confirmed by a more evident argument, I bring the solution of Saturn or Lead, the which it self also can fish out the same Pearl from Salt, without Silver. If anyone shall operate after the same manner which I but now shewed, I also add this, that I am hereafter to teach a way whereby *Saturn* may be able to fish pure simple gold out of all salts.

Let us now return unto the moist and cold fire of the Philosophers, and see what an admirable fire God hath hidden in Salt Peter.

That a most potent fire doth lurk in Salt Peter is not worth our confirming by any argument. That horrible Gunpowder which shakes or rends all things asunder proveth the thing most manifestly, and *Aq. Fortis*, which dissolveth and destroyeth all Metals, yet another fire of far more powerfull virtue is hidden in the same Salt, which very few have known and beheld, and the which we will here make manifest, for the honour of God, and the profit of all mankind.

XVIII. *Of the preparation of the moist and cold fire of Salt Peter.*

Take of Potters earth being without sand, and burnt, 2 parts, and 1 part of Salt Peter very well purified, with both these matters being reduced into powder and well mixed together, fill a glass retort well coated with clay, put it in a Furnace for distillation, and joyn a Receiver to the Neck of the Retort, into which put as many pints or pounds of water as there were pounds of Salt Peter mixed with the earth, that the Spirits going forth may so much the sooner be condensed into moisture, after thou hast exactly joyned and luted thy Receiver to the neck of the Retort, with a due lute (or clay) kindle a fire according to Art by degrees, and the spirit of the Salt Peter (representing a yellow or red mist in going forth) will joyn it self to the water placed in the Receiver.

All the Spirits being come forth, take off thy Receiver, and separate them from the water, put this sharp spirit of Niter into some strong glass: it being by distilation freed from its superfluous phlegm and rectified, is applied unto Medicinal and Chymical uses: concerning the operations and virtues whereof there is mention made in the second part of my

Furnaces, and in the Dispensatory of *Schroderus*. Moreover, the manner of extracting and concentring a fire of this spirit is this.

Pour this spirit of Niter on the powder of *Lap. Calaminaris* or *Zink* reduced into small little grains that it may dissolve as much as it can: and when it will dissolve no more in the Cold, place the glass in hot sand that it may dissolve more of the matter, filtre the solution and by sand draw off all the phlegm in a glass retort; the phlegm being all come off, change thy Receiver, and increase thy fire and drive out a fiery oyl, which oyl thou shalt keep well stopt, because it uncessantly fuming would wholly vanish away in the Air.

This fiery smoke of Salt Peter, as also that of Vitriol, and common Salt, burns up all Herbs, Grass, Leaves and Flowers, and whatsoever it toucheth, just as if they were burnt with a strong heat of the Sun or Fire.

And this is the preparation of the moist and cold fire of Salt Peter, of the use and efficacious operation whereof in Medicine and Alchymy, it shall be more exactly and fully treated on in the following Chapters.

XIX. *Of the moist fire of Allome.*

Allome also by the work of Distillation and Concentration yields an efficacious fire most like to that of Vitriol, in efficacy and virtues, but the plenty doth not answer by reason of too much earth wherewith it abounds, yet if somewhat of the other Salts be added unto it, it rightly and orderly bestows its fire.

XX. *Of the moist and cold fire of Sulphur.*

Although Sulphur finds not a place in the order of Salts, because it refuseth the solving in water, yet it contains a vitriolated salt laid up in it, which doth not manifest it self before that the more fat substance thereof shall be withdrawn by inflaming, by the operation whereof the salt is attenuated or made thin, and is carried on high by the flame like a sharp smoke, so that this sharp sulphureous spirit burns all things which it toucheth, after the manner of all those fires which are drawn out of salts.

For the attaining this vitriolated and sulphureous spirit the flame of the sulphur is to be received, in a certain Alembick made of glass or earth, peculiarly for this operation, wherein that vitriolated spirit of salt condenseth it self, and issues forth like a thick fat, and fiery oyl, not unlike to that which is made of Vitriol, whereof it is treated on in my Furnaces.

All these things do very evidently confirm those particulars, which I have many years agoe committed to memory: concerning Sulphur and Vitriol, to wit, that Sulphur is the original of all metals, and that no metal at all is digged out of the earth, which hath not either Vitriol or Sulphur, or for the most part both adjoyned unto it, for no sulphur is destitute of vitriol, nor vitriol of sulphur, so that both of them do challenge the rise or birth of any kind of metals whatsoever unto themselves. And every sulphur is by its own proper agent or vitriolated salt, which it hath in its possession by nature (whereto the central fire of the earth is an assistant) excocted or boiled up more and more into a metal; neither doth this universal agent or vitriolated salt depart from the fatness, or its patient, untill the fatness together with the agent shall depart into a malleable

metal, or a metal that undergoes the hammer. Lead, iron and copper, do make this thing manifest, which metals do never appear without vitriol and sulphur, and that for this cause; because they being as yet unripe and imperfect ones, do stand in need of their agent. A less plenty of Sulphur or Vitriol is found with silver, than with Copper.

Gold hath little of Vitriol or Sulphur, yea plainly none at all, if it shall attain to its highest maturity, because it is then found to be pure and malleable, and wants not a further fusion or melting, but by how much the more of Copper, Gold, and Silver have, by so much the more of Vitriol or Sulphur they have, as also require the more time for their ex coction and perfecting.

From these particulars, it manifestly appears in what respect metals may in a long time be generated in the bowels of the earth by their first principle, namely Sulphur; and may be ripened to perfection, by its own Salt, or agent, which it hath in its possession.

If nature doth effect this in a long time, why also may it not come to pass, that art should perform the same in a shorter time?

But let these things that have been spoken be sufficient, he that understands not, nor also perceiveth the scope or mark, which I so clearly shew is blind, and doth not admit of a remedy for his blindness.

Truly I judge these few things, (but yet such as shew a most long way with a most shining Torch) to be sufficient concerning the moist and cold fires of minerals, by which the ripening and perfecting of metals, are to be perfected as well by nature in the

bowels of the earth, as by art above the earth.

N. B. If therefore a mineral may by the help and impulse of its own vitriolated Salt, wherewith it is endowed, be ripened from its vile form and lowest degree unto a better, and at length unto the best of all, that is, unto the purest gold, it being that which none (that is seasoned but with the least knowledge of natural things) will deny.

Also if such a Sulphur is hidden in any vegetable, which answers to a mineral Sulphur in its nature and properties, why also might it not come to pass, that this same Sulphur might be perfected into mature gold, alike equal to the other? from hence it most evidently appeareth that in any Herb, although the most abject one, which is promoted by the Sun unto its maturity, a spark of the immature beams of *Sol* may be found, which through the operation of art, are to be changed into pure gold. But after what manner such a Sulphur may be extracted out of any Herb or any Wood whatsoever, in all things like to a mineral one, I have long since delivered in my little work concerning the nature of Salts, and in the second part of the *miraculum mundi*, and below I will demonstrate by a much more clear manifestation.

Let us proceed to Animals and Vegetables, and consider whether in these very things, such a ripening fire may be found, and may from thence also be drawn and made visible.

But we must know that no small living creature or small Herb can grow, live, and receive, increase without a certain fiery and Salt Agent; the which although it cannot be believed by any one that is lifted up with pride, and of a stupid brain, yet it in very deed exilteth, and can easily be demonstrated by the hand of the Artificer.

XXI. *A most powerfull manner of extracting a fire out of any Wood, or any Herb whatsoever, and of rendering it palpable and visible.*

Fill some glass, stony, or earthen distilling vessel with any dried Wood or dried Herb, and distill off the Vinegar or sharp liquor from thence, and separate the Oyl from it; and pour that sharp liquor on *Lapis Calaminaris*, *Zink*, or ashes of lead, which matters do dismiss all the unsavoury moisture in distilling, and retain the whole sharpness with themselves, the which being distilled from thence ascends like unto meer fire, it being of great use as well in Medicine as Alchymy, whereof mention shall be made hereafter.

But here it is to be noted that this fire extracted by distillation, is onely a part of that fire of the Wood and Herbs, and that the other part remains in the Coals thereof, which is far more fixed than that which ascended, and is that Sulphur which we spoke of but now, which wholly answers to the nature of a mineral Sulphur, and which may be extracted out of the Coals being solved by *Sal. Mirabilis*, which shall be taught and manifested in the following Chapter.

For if there were no fire in them, after what sort should they burn and draw out heat? all Coals being converted into ashes, after that their hidden Sulphur hath done its office, the feces of the Wood remains like dead ashes, wherein as yet lies hid a certain singular vegetable fire, being altogether of another nature, and wholly contrary to that which ascendeth in Distillation. This water being extracted out of the ashes presents a *Lixivium*, the which by decoction exhaleth all the moisture, and leaves the rest a fiery Salt, whereof in the second part of my Dispensatory. If it be made hot without fusion, or melting, it becomes the more fiery, so that it being bound to the

skin for some hours in the bigness of a pea, it burns a small hole therein as if it had been burnt with a bright burning iron. And therefore Chyrurgeons make use of such fires that they may open unripe Ulcers, or make Issues.

It may be seen by these particulars that in any Wood or any Herb, there are also fires of divers kinds, the which also are found in living creatures, they being partly volatile and sharp, and partly fixed, and obtaining the nature of *Alcalies* or *Lixivial* Salts.

Both Salts or Fires, after they are conjoyned they lose their fiery nature, and get unto themselves another quality and property; to wit, a middle one, and these two contrary fires become an essential tartarous Salt, and sweet in use, wherein no fire appears, although that fire being turned out and in by art, may be again extracted and made visible.

Concerning these wonderfull changes of nature, and conversions out of one species or particular kind into another, many things are found up and down in my writings. In the first part of the continuation of the miracle of the World, it is manifestly described after what sort a plenty of such fire may be attained out of Woods, but the concentring thereof is here delivered. In general it is here to be noted, that one Wood or one Herb doth more abound with such a fire than another. But by how much any Wood or Herb is the elder, and by how much the longer the Sun-beams have operated on it, by so much the more of fire is in it, as is manifest from the Vine; which hath received plentifull Rays of that sort, and therefore excells all other vegetables in the greater and stronger fire, as appears not onely by the burning spirit, but also the tartar, or tartarous Salt thereof, which is almost all fire, and yet without

Distillation and Calcination it cannot be manifested.

That therefore it may be brought forth into open view, and be rendred visible, we must make use of the following operation.

XXII. *The manner of manifesting the fire of the Vine.*

Fill thou a Glass Retort with common Tartar, and distill forth the volatile spirit and oyl, the which thou shalt separate after a due manner. Great virtues are in this oyl, whereof I have made mention in the second part of my Furnaces. The spirit is to be rectified in B. that the fiery substance onely may depart, and the unprofitable flegm remain behind; the rectified spirit is to be poured on the fixed Salt, (residing in the Retort, which must be first calcined by a strong fire and made fiery) and from thence again distilled, that the fixed Salt may retain the rest of the unprofitable flegm, and the spirit attain the greater fiery virtues for the performing of wonderfull effects in medicine, the which my writings do teach.

XXIII. *Another manner of extracting or drawing forth a far more stronger fire out of Tartar.*

Dissolve thou that Alcalizated Salt from which the spirit was abstracted in rectifying in a little water, that it may become a very sharp *Lixivium* or Lye; pour one pound of this *Lixivium* on two pounds of white Tartar in a Gourd, and that being reduced into powder, put on a head which being well luted on with clay, set it in sand and kindle a fire by degrees, if thou shalt rightly work thou shalt obtain a most subtile fire, one drop whereof doth burn the tongue, as if it had been touched with a burning Iron.

How wonderfull things may be effected by this

fire, I have already shown in other places of my writings.

XXIV. *A manner of drawing forth as yet a more vehement fire out of Tarter.*

Take of crude Tartar and the *Regulus* of *Mars*, or the purest metallick part of iron, the *scoria* being separated, equal parts, the which thou shalt mix by beating together, put them in a crucible with a cover so well fenced with clay that it may admit of no air, keep them in a bright burning fire for the space of an hour, then take them away.

From all these particulars it is made known to every one that a vehement fire lies hidden in vegetables readily serving for the effecting of many admirable things in Medicine, Alchymy and other arts, from the declaring whereof the shortness of time and this treatise, commands us at this time to cease. But moreover we must see whether living creatures also are potent in the same fire, and in what respect any one may be made partakers of the same.

XXV. *The preparation and Con-centration of fire out of Animals.*

As the Vine is the most noble of all vegetables, so man also is esteemed by all that are indowed with judgment to be the most noble of all Animals, or living Creatures; the truth whereof the thing it self affirmeth by a plentifull Testimony.

Therefore we pass by all other Animals in silence, and do here shew (by the following manner) the preparation of that fire onely that lies hid in Man.

The Ancient Philosophers have called the great

World, *Macrocosmus*, and man as it were the lesser World, *Microcosmus*, and a comparison being made, they have determined that what things are found in the great World, the same are to be found in the lesser World, that is in Man.

From whence also they unanimously believed, and also committed to memory, that as well the life of the greater, as of the lesser World, doth consist in a saline and saltish spirit, and that this spirit doth bear rule in one place more, in another less. Neither is there any one also who will or can deny, that the whole earth is filled with Salt as it were its Balsam; and that minerals are alike equally bred thereby in the very bowels of the earth, as vegetables are in the Superficies.

Yet notwithstanding the Salt of the great World is no where more plentifully found than in water, or in the Seas; the which as it is a thing most known, it needs no confirmation. The same thing is to be understood concerning the little World, *viz.* Man, and although the whole body in all its parts abound with their true Balsam, yet a greater plenty of this Salt and Balsamick spirit, is found in his flesh than in his bones, a greater plenty likewise in his bloud than in his flesh, but the greatest plenty in his Bladder, or in the Salt Sea of the lesser World, the which is hidden to none, but it is the custom not to seek necessary things in remote places, but in places nigh where they are most easie to be found.

Hence because a more plentifull Salt is no where found in man than in his Urine, we of right lay hold on an occasion of seeking and con-centrating the fire in the same, and we make use of the following preparation.

XXVI. *The operation of preparing a fire out of man's Urine.*

I have at large delivered this operation in the second part of my Furnaces, whither I refer the Reader; where he shall not onely find a manifold composing of this fire, but also its various use in Medicine.

But although it be needless to describe that operation there repeated, yet it seems meet to me (for a more evident declaration's sake) here to adjoyn some admonitions which concern it.

XXVII. *Observations which concern the preparation of an Animal fire.*

Such a fire is for the most part drawn forth out of man's Urine being putrified by it self for the space of some weeks, and is by rectifying converted into a moist and fiery essence as the second part of my Furnaces sheweth; I have there taught a more easy manner of drawing forth the same fire out of *Sal-Armoniack*, which is prepared out of Urine, and by the addition of a strong *Lixivium* it is distilled and rectified.

I have also taught the manner of preparing the same fire out of *Sal-armoniack* by the Addition of *Lapis Calaminaris*, by distilling it through a Retort.

Spirits rightly prepared after these manners are equally profitable in Medicine, Alchymy, and other arts; because they are those which being well made are all of them good, after what manner soever they may be prepared.

But although these volatile animal fires do readily serve for the performing of famous and notable things (and the fixed Salt of Urine it self, may by Distillation and rectification be con-centrated into

another kind of fire) yet they are at a far distance from that true Philosophical fire which the Ancients have hidden with so great care and diligence, because that in these preparations the best and chiefest part of the fire flies away and is lost. But this I say, that these fiery Spirits of Urine being con-centrated even as I have taught them to be, are indeed able to effect all those things which I have attributed to them, and shall as yet attribute. But indeed they do not coagulate the con-centrated fire of the Vine, which coagulation is not the least key for the composing of an universal Medicine.

For when the Spirit of Urine attains this nature, that by coagulating the most subtile Spirit of Wine, (when poured on it) into a Salt, this Salt extracts the soul of Gold duely prepared; the which also, if it be changed by it self, and converted into a dry and sweet Salt, and be fixed, possesseth the virtues of a Medicament of a most famous and great use in Medicine.

Every one that is illustrated, but even with the least light of nature, shall be able by an easy business, to smell out what may hiddenly lurk under this Salt.

From the most pure Vine is the substance of the Spirit of Wine, which strengthens the heart of man beyond all other things, as also his brain, and other members.

The Spirit of Urine is the purest and most subtile Mercurial Animal Salt, not having its like in penetrating, opening, and resolving.

This subtile Mercurial, Animal and piercing fire therefore, being joyned to the most pure vegetable, that is, the Spirit of Wine, that it may be changed

together with it into a dry Medicine, any one shall be able by an easy conjecture to foresee what it will effect in Medicine.

But that I may make manifest the errour, and demonstrate the cause wherefore a Spirit of Urine is so seldom prepared, which will coagulate the Spirit of Wine into a Salt, I admonish that a respect be had by every one of the following particulars.

For first it is to be taken notice of, that the most subtile part onely of the Spirit of Urine, and not the more gross part, is fit for the coagulation of the Spirit of Wine: If therefore in the preparation of the same, the most subtile part shall be lost, through the negligence or ignorance of the operator, it can in no wise be brought to pass, that the more gross and dreggy part should cause that coagulation.

But that most subtile Spirit doth not onely vanish away in distillation through an insufficiency of the Luteing not being good, but also a great part of the same is lost before distilling, to wit, when the Urine being successively gathered, is constrained to stand and wait too long, so that the Spirit by little and little exhaleth and departs into the Air, especially when it is gathered together in the Summer or Winter time, for that fire not being patient of any extreme, is expelled by a little heat or cold, and therefore the fittest times for collecting the same are the Months called *March* and *May*, or *September* and *October*, in which Months the Air is temperate, neither too hot, nor too cold, those Months therefore are the fittest for collecting and extracting of an Animal fire out of it.

Furthermore, *Calx-vive* or *unslaked Lime* is to be added to the Urine (when putrified) and distilled, that the insipid water may be so much the more

easily or readily separated from that volatile fire, the which is not done if it be distilled *per se*.

I would not pass by these few things in silence for the sake of the Reader, and of him that is studious of good Medicines: But after what manner Metals may be amended by this Animal fire is not here shewn, but God willing shall by and by in the following Chapters. But we put an end to the preparation and con-centration of Animal and Vegetable fires, with these sayings, whose admirable virtues and faculties in medicines, Alchimy and other profitable Arts, shall here be manifested in order, as much as time will permit.

Look I pray you on the Elementary Sun, as also on the fire of woods, and the virtues of light, and the virtue of both, the which all creatures, and especially mankind it self, is constrained to make use of for their own safety; could even the least grass bewray itself? or any small worm be bred and live without the Sun? could any workmanship or artifice be exercised without the help of common fire? the which, if it were not, we should be constrained to eat unboyled Herbs, and raw Flesh like wild Beasts: yea, the whole conversation and negotiation or traffique among men should be wholly taken away, if earthly fire and light should be wanting unto us.

If there were some one man onely in Some whole City or Province, or in a whole Kingdom, who alone could make others partakers of fire and light, would there not be made the greatest concourse of all men unto him? but because it is known to every one, and everyone hath known by an easy manner, how to strike it out of flints, it is had in no esteem, for it is customary not to esteem those things which are made common, although they are pretious. The same

thing hath happened to the fire, the which although it ought to be made of greatest account, yet it is reckoned of no worth because it is common and vulgar.

But even as the common fire, and that known to every one, doth by very many most profitable operations bring much good to mortals, who can least of all want the use thereof; so also I affirm that those artificial and hidden fires are to be very much accounted of, because a Phisician can hardly be without them, for the preparations of efficacious Medicines, and a Chymist can never want for the transmutation of the more base metals into better, either of them without the aid of those fires shall perform nothing of any great moment in Chymical Labours.

He that works and is ignorant of such fires, what will he effect in metallick operations? he being conversant in cold and darkness is afflicted with the Same difficulty, as a certain brewer or baker is, who wants wood in the winter season, or who is not able to use water, it being congealed into ice, the one he cannot bake although he hath the best meal, and the other brew drink although he have abundance of the best malt.

So also goes the matter with Alchymical Affairs, the want whereof causeth that we handle not the most noble Alchimy with any profit, but rather receive loss from the same, daily experience being witness, that 100 are wont to be sooner undone than that it happens to any one man to get himself riches thereby. The blame of which discommodity is not to be transferred on an impossibility of the art, but rather to be imputed to the want of those moist, cold, and ripening fires extracted out of Salts, the

which after what sort they ought to be used for the amendment of metals, as also for medicine and other arts, shall be taught partly in this, and partly in the other Centuries.

XXVIII. *The general use of our concentred fiery and ripening Spirits, extracted out of Salts, in the amendment and converting of metals into more noble ones; also the preparation of many excellent medicaments, and the increase and amendment of many other arts, are briefly here demonstrated; the which, God granting, shall more largely be declared in their particular use.*

That I may discourse in few words whether imperfect metals may by the operation of the more common and gross Salts, and of the fire be broken, destroyed, cleansed, and reduced into a better form, it being that which the fifth part of the prosperity of *Germany* confirmeth by divers experiments.

I affirm that the pure Spirits of Salts, do with a greater efficacy, and far better effect the same, the which, since those simple Spirits are able, better and more easily to perform than gross Salts, why should not also con-centrated Spirits after the best and easiest manner of all perform the same thing?

From a like reason the use of Salts shall not be of so great efficacy in the preparation of medicines, and other arts, as the useing of common Spirits is; the which, notwithstanding being still for the most part clogged with much phlegm, do of necessity not disclose so great virtues, as those con-centred fiery Spirits do which are freed from all phlegm.

The Sun-beams are for an example which do not send forth so great heat, when they are co-mixed

with a moist air, as also green and wet Woods do not so vehemently burn with heat, as withered and dry ones are wont to do.

Yea if the hot beams of the Sun are con-centred in or by some hollow glass increasing the fire, or the fires of Coals by a strong blowing of the Bellows, and are as it were constrained into straights or narrow passages, they effect ten times, yea one hundred times more than those which are not centred together after such a sort. But by how much the more strictly those forces of the beams of the Sun, or of other fires are con-centred by so much the greater, stronger, and sharper heat they draw out.

A burning glass of one foot Diameter, onely enflames Wood; but one of two foot Diameter will melt Tin, Lead, and other metallick matters of that sort, which are easie to be melted, as *Bismuthum*, or the whitest, lightest, and basest kind of Lead, *Zink*, the non-splendent metallick dark matter *Koboltum*, &c. But if you extend the Diameter to four foot, the Sun-beams taking the stronger increase will melt silver and copper, and will render iron it self so bright burning hot, that it may be wrought with a hammer, as if it had been heated with Coals. This effect is to be ascribed unto the con-centring of the Sun-beams by an instrument, and to the constraining of the heat of Coals, by Bellows, or Wind.

The same thing is to be understood concerning our con-centred and moist fires, which ought to be compared, not onely with the common beams of the Sun, or with the heat of Kitchin fire, but also with those Sun-beams which are con-centred by a glass, and with the fiery heat of Coals constrained or forced by windy blasts. Whence they must of necessity be of greater virtues than the common Salts, and watery

spirits of them, the which the more quick sighted will sufficiently comprehend and believe. Simple Countrey People do see this thing with their eyes, and handle it with their hands, as well knowing that the subtile, hot, sweet Spirits of Wine and Ale, (and those procuring strength to the heart,) when they are freed from all moisture by Distillation, and con-centred by Rectification; effect ten fold more than if they had still remained with their humidites.

That thou mayest understand the thing more clearly, well weigh thou Grapes, Bread-corn, or the Fruits of Trees, which we eat in that substance as the trees bring them forth unto us: and they afford us a nourishment, but not such a one, as their juice being pressed out, and separated from its dreggs, and by fermentation reduced into a clear and sweet drink.

If necessity compell, Bread corn may be used for nourishment as it is, yet not so well as when it is separated from its husks, being changed into meal, and reduced by water into a mass or lump, and Salt and Leaven added, and by fire concocted or digested into Bread of the best Savour. By the same reason Bread-corn being boiled in fair water yields a potion indeed somewhat better than the water it self, but if it be artificially handled, and boyled up into Ale or Bear, the husks are separated from the more pure juice, the which afterwards by fermentation, separates many dreggs from it, and arrives to a more noble nature, yielding a sweeter and better drink. But if the same juice be after that brought by distillation into a greater purity, and con-centred together by rectifying, that the virtues thereof may come into a narrow compass, (because it is a meer fire) it will exercise far greater virtues, than gross Bread-corn which wants a power of exercising so

great virtues.

So also doth it succeed with con-centrated Salts, to wit, when the dreggs are separated from them by the help of art, and the more pure parts converted, and con-centred into a fiery substance, performing effects of great moment in Alchymy. But that Salts do commonly destroy metals, as well by a moist as a dry way, is known to every Barber, and persons of no reputation. But after what manner metals being destroyed may be reduced into more noble bodies than they were before, there hath been none hitherto (who being skilled in that artifice or craft) that have not hid it with the greatest care. Hence it hath come to pass, that nothing of profit hath been perceived from metallick transmutations, and Alchymy it self hath been made a mock of by the most unskilfull rout of ignorant ones, as if it were most false, and at the farthest distance from truth.

That this doubt therefore may be taken away, and the truth it self may be more evidently placed in our view, I have resolved in my mind, by God's assistance, to place before the eyes of the whole world, a true and profitable transmutation of metals, by a clear description, and to assert the certainty of so many writings set forth by such men, by the most true experiments, so that every one that is seasoned but even with a light or small knowledge of the fire, may by an easy business hereafter obtain some profit from them. But I will first treat of common and crude Salts, and then of the simple Spirits of those, and at length of their con-centred Spirits and Fires, which we have taught to extract out of them.

But before I attempt to describe and assert this kingly and noble art, I have been led first to shew the cause why some places do occur in the description of

the same, wherein words are omitted, and signs or blanks reposed instead of the same.

Indeed this was therefore done, that the art may be concealed from the unworthy, and they in all respects to be driven from the same, and may be made known onely to Adeptists, and the Sons of Art.

Besides also that all secrets may not in all places, and without difference be divulged, but that the chief things thereof may be preserved for friends, lest they be trodden under foot, and broken to pieces by the unworthy, but that they may be left to friends as it were a certain secret stroak, and that an unknown one to others, for to fight successfully.

I therefore earnestly require of every one by a friendly Petition that he be not suddenly angry, if he be not able clearly to perceive, by the sharpness of his wit, all those things which I propose, but rather let him consider that they are not written for him, but for others; by whose capacity they can be perceived. Neither is it altogether necessary that all do know all things, neither also would it be of concernment if friends and enemies attain all those things in their understanding alike, without any difference, which I here openly produce by my descriptions; it is sufficient that some onely, and indeed those that are worthy may clearly and knowingly possess the same, and testifie the truth.

XXIX. *An infallible practice of changing the more imperfect Metals into more perfect ones by the help of crude Salts.*

As I have already a little before, and also in other places of my writings, evidently enough demonstrated that Salts, or the spirits of Salts, are in

the earth, or out of the earth a universal Agent, promoting the maturation or ripening of metals: So here I again firmly affirm the same thing, and do say, that by Salts the gross bodies of metals are destroyed, and trans-changed into more noble metals, and that indeed after divers manners, and that more easily or difficultly as any one shall be more or less conversant in Chymical labours.

I will hear God willing make manifest all things, yet not to every one, but to the worthy onely; and that indeed after the manner of a Clock or Watch-maker, who taking some Clock or Watch in pieces, do lay up all the parts thereof in some place without any order; the which he that is unskilfull in the art, shall never again compose and reduce into order. But another who before hath handled that art, will by an easie labour again conjoyn all those parts, and reduce them into the former body of a Clock or Watch.

All those therefore who have experienced the foregoing labours to be perfected by the fire, shall by these my descriptions easily dispatch or accommodate themselves in future things, not easie to be understood by the rout of ignorant persons which have made no experiments in the fire; who will in vain look into those things which I have written; no otherwise than as if any one being plainly unskilfull in reading and writing, should behold written letters, and knows not what they signifie, or what argument they may contain: Such a man if he would be angry with the writer, should he not do him much injury, because as being far remote from the fault of that ignorance which hinders him, whereby he cannot read these letters which he had never learned to read.

The same thing must be understood concerning my writings, which are openly published, not for the sake of any one, but onely of those who have first learned to understand those kind of writings.

But that I may set upon the thing it self, and may teach the amendment of metals for the better, and shew the very foundation of the whole business, I say, that a true changing of them is attempted in vain, unless they are first destroyed, and wholly slain. A grain of Wheat, as Christ himself saith, will never increase or multiply, unless it first putrifies in the earth. If therefore metals ought to be destroyed by Putrefaction, that must needs be done by the help of Salts, according to the truth of the Philosophers Maxim: the corruption of one thing, is the generation of another. The death of one thing, is the life of another. Since therefore metals must die, it must needs be that death be brought on them by enemies, or contrary things, because nothing in natural or artificial things dieth, unless it be slain by its own enemy.

Since metals therefore ought to be destroyed, and killed by their enemies; it is of necessity that they are invaded, tortured, and so long vexed by the same, untill the Agent as the stronger part, be overcome by the Patient as the weaker part; that it be slain by it, [or rather the Patient be overcome by the Agent,] and be translated into a better nature, in which action the Patient ought not to depart from the Agent, but to be tortured with an un-intermitting torment.

Whosoever seeing his enemy and conceives himself of the weaker force, indeavours as much as in him lies to decline him, by retreating, but all occasions of running away and slipping aside being taken away,

he is constrained to deliver his life to his enemy, who handles the Patient or suffering party according to his own pleasure, and doth whatsoever he will, therefore after the same manner is the melioration of metals, the which although they should be melted together with Salts their enemies, yet would they make little account of them, but would separate themselves from the same; so that every part of them being unhurt, would keep its own nature and essence. But if the Salts do take away the occasion of flight from metals, and do inclose them in their Prisons, that they have no way of escaping, but remain, suffer, and die, then they obtain victory over the Salt, and of slain metals are made more pure and better.

This thing is done in the fire by the moist and dry way, of which enough hath been spoken already.

This is the whole and intire art, and there needs no other superfluous teachings; yet he whom these things doth not Suffice, let him read the following operations thorough, wherein he shall find truth, and see with his eyes, and handle with his hand; those things which have been heretofore impossible to him, and very many more.

XXX. *After what manner Metals may be slain by their enemies and be transmuted into better.*

Unto Metals not one but many enemies are adverse; and part of those enemies are enemies to some and friends to others, but the other part is friendly to some, and at enmity with others. For example sake.

Nothing more prosecutes Gold with an hostile hatred than burning Sulphur and sulphurious Salts, such as are Alcalies, and crude tartar; the cause of

this hatred is, because Gold is nothing else, but a fixed Sulphur, and therefore it disagreeth by a capital hatred, with every burning Sulphur; Silver and Lead do love every *Sulphur, and all sulphureous Salts, such as are Vitriol, Salt Peter, Salt Armoniack, and the like*, the which they stand in need of for their colour; they have an hatred against *Kitching Salt, because it is of a mercurial nature*, and therefore not requiring its help, but onely desiring a Sulphur and Tincture, *Copper, Iron, and Argent vive*, or Quicksilver do possess both natures, to wit, *a mercurial and sulphureous one*, and for that cause they prosecute all Sulphurs, and any Salts with love.

Tin is an enemy of all Salts, whether they are sulphureous or mercurial ones, when it is slain by Sulphur and Salt, and recalled unto life, it obtains a more pure and thin or fine body, whether of Gold or Silver, according as it shall be handled.

Moreover, if any should desire to obtain as yet a better essence out of better metals, its necessary that he slay them by their enemies, and raise them up again by their friends; by how much the greater and vehement the enemies are whereby metals are slain, by so much the more those metals do suffer, and with so much the more famous and better bodies do they re-arise.

The whole art therefore consisteth in this, that metals are overwhelmed by their greatest enemies, are slain by them, and after death are separated from them, and that by their best friends, are restored unto a better life.

Thou hast the whole art, neither doth any other thing remain than that thou attempt the matter, and set to thine hand.

For example sake, I will add an operation. Slay a light metallick matter by the sharp Spirits of sulphurious Salts, that it may become a white calx; free this from the Salt Spirits, by water being poured thereon, the which being freed, cannot be reduced into a metallick body by any violence of fire. Likewise slay mercurial metals as are B. by mercurial, Salts their enemies, and change them into white calx's, the which being freed from their saltness, *will be liquid or flowable*; mix those calx's, to wit, the mercurial and sulphurious being slain, put them into a double vessel of cement, cover the uppermost with a certain plenty of B. fence well the juncture of the cementing vessel with clay, set them into a cementing furnace, and at the beginning administer a gentle fire, that the calx's may rise up against or assault each other, and the fixed sulphur may bind the fugitive flowable and mercurial calx's, D. for although in the cement something would depart into smoak, yet that is intercepted by E. and after a certain manner is thus exalted into the degree of F. Too much fire is not presently to be joyned to the cement or plaistering it self, that some time may be granted to the matter that is swift of flight, whereby it may adjoyn it self unto the fixed matter, and may also become fixed and constant with the same for four hours space, therefore the fire shall be somewhat the more slack, and afterwards for the space of eight or ten hours, it shall be kept in a clear bright burning heat, that G. may not melt: the said time being ended, the fire is to be extinguished, and the cementing vessel to be taken away, in G. a black or brittle body shall be found containing Silver, the easy separation whereof we shall afterwards hear.

The calx of both metals being coagulated into a hard stone, if by grinding it be reduced into powder,

and be put into a furnace fit for this thing, a metallick body will be attained, being impregnated, not with a little Gold and Silver, especially if the metals shall be slain, not by the Spirits of common Salts, but with gradatory martial waters. In this cement, H. is rendred aureal or golden, and I. is silvery, by one and the same endeavour. The profit also it self is of no small moment, especially if this operation be exercised with the greater quantity, and the bigger instruments alwaies to supply or afford Silver being pregnant with Gold for separation.

XXXI. *A brief and compendious manner of extracting and rendring corporeal, a volatile Gold out of coloured Flints, Red Talck, Granates or Red Marble Stones, Sand, White Clay and the like metallick earths.*

At the beginning, these mineral or metallick earths are to be made bright burning hot, to be quenched in cold water, and to be broken in a mill, into meal or powder.

After that they are thus broken, thou shalt put them into some Waldenburge, or Cullein Can, and shalt pour so much of *Aq; Regis* on them, that they may onely be moistened, and let them, together with the Can, be placed in a fire of coals, and incompassed therewith, to be made hot; after that the minerals and *Aq; Regis* have waxed well hot together, so much hot water is to be poured on those very minerals as shall be necessary for the extracting of the *Aq; Regis*.

Put the minerals thus moistened with the water into great pots, and those made of the best earth, having many little holes in the bottom, on which lay paper for sustaining of the minerals that they may

not fall out through the holes, but may dismiss the water onely. After the first water is gone forth, other hot water is again to be poured on, and this effusion of water is so long to be continued, untill it depart with the very same sweetness as when it was poured on, and no longer offers any sharpness to the tast. So the common and hot water brings away with it the *Aq. Regis*, and the *Aq. Regis* Gold out of the minerals.

The earthen pots may be placed in a bench bored thorough with holes, through which their bottoms may pass, that so the water may be received in vessels set under them.

N. B. The minerals may also be put into barrels or hogsheads having a double bottom, such as are used for the cleansing of Salt-Peter, that so water may be so long poured on them, untill all the acrimony be extracted by the water.

XXXII. *After what manner out of Minerals being extracted, a true Salt-Peter may as yet be gotten with profit.*

The minerals being after the said manner freed by extraction, they are to be co-mixed with an equal weight of *calx vive* and wood ashes, and cast together into an heap under some open gallery or room, that now and then it may be moistened with Urine, or in want of that with Rain-water, as oft as they shall be dryed.

In this operation the *Aq. Regis*, which remained in the minerals, and was not wholly extracted by the hot water by the help of the Urine or Rain-water, changeth the Salt in the *calx vive* into the best Salt-Peter, the which may be washed off with Rain-water, and boiled up after the wonted manner.

Therefore after the said minerals have been handled for half or a whole year after the said manner, and are by rinceing deprived of the Salt it self, they may again be (under an open Gallery or Roof so exposed to the air, that Rain come not at it) collected into an heap and be handled after the former manner, for the supplying (in their own time) new Salt Peter, the which may be done for many years together. So also from that *Aq. Regis* which could not be drawn forth from the minerals, a profit is received.

The cause of this Salt Peter, its being made, is this, because the *Aq. fortis*, or *Aq. Regis*, or Spirit of *Nitre* in the same Waters, contains as it were the seed of Salt Peter, it obtains that nature, that like an Herb it may take an increase from other Salts, and be multiplied; whence perhaps the old proverb arose, to sow Salt, which thing the ignorant have received with mock, saying after what sort can Salt be sown and multiplied, when it is solved and drawn from Rain-water? But it hath lain hid from those, what kind of Salt it is, and after what manner it is to be sown; the which we have here demonstrated, also the saying of the Ancient Philosophers, asserting that Salt may be sown and multiplied like Vegetables.

As to what pertains to those sharp waters, whereby gold is extracted out of minerals, by what skill they are to be handled as also without loss, yea that they may render that gold with profit; the following operations are to be observed.

XXXIII. *A way shewing the extraction of a volatile and fixed Gold out of the Water, from which the Minerals are withdrawn, and the profit which may be received by that Water.*

The best way is this, into the solution of gold, or into the water which containeth gold, pour in the solution of *Lune* or *Saturn* more or less, even as you suspect more or less of gold to be in that water: As for example. Let there be in the water two or three half ounces of gold, dissolve thou therefore about two or three half ounces of silver, or lead, in *aq. fortis*, and pour this solution into the water containing the gold, be it more or less, mix them well together by shaking or stirring, that the water may obtain the form of milk; after they have settled in quietness, shake or stir them again, and repeat this motion for divers times the space of one hour, and at length suffer all quietly to settle to the bottom. Separate all the clear water from the sediment by pouring it out, and strain the sediment itself through a filtre, that the water may be wholly separated from the silver.

This silver is to be dried, and reduced into its former body, after the manner which shall by and by follow.

N. B. If the silver or lead had not extracted all the gold, the which may easily happen, yet that gold is not lost, for because sweet water whereby the *Aq. Regis* is weakened is present, the which now remains unfit for another use of extracting out of minerals; now by the solution of *Lune* or *Saturn* deprived of their gold, a sharp *Lixivium* made of wood-ashes, and *Calx vive* may be poured on the same, with which a little is to be added or admixed. For do precipitate or fix all gold in solutions.

After this manner the *Aq. Regis* is killed, and every metal which it has yet retaineth, it dismisseth like a yellow powder, whether it be gold alone, or mixed with copper or iron, which powder is to be dried, and reduced after the manner which shall strait-way

be taught.

N. B. That the water after the total precipitating of the metals, being exhaled in a Copper Kettle unto a thin skin, and exposed in peculiar vessels unto the cold, it will afford thee a beautifull Salt-peter, concreted or grown together into drops or Ice-acles, whereof thou may'st again make an *Aq. fortis*, to be again made use of for the like operations.

He that shall rightly operate shall get so much Salt Peter as will recompence the charges of the *Aq. fortis*, and *Aq. Regis*: So that he shall extract his gold without costs. For five or six pounds of *Aq. fortis*, wherein two or three pounds of Salt is dissolved, and the which hath at length been precipitated by a sharp *Lixivium* prepared with *Calx-vive*, doth render ten pound of Salt Peter, the which doth answer the price of five pound of *Aq. fortis*, and this is the manner of extracting gold out of minerals without cost.

XXXIV. *Another and better manner of extracting gold by Aq. Regis.*

Take of by torrifying made into ashes, pour the extraction into an iron Pot, and stir the *Calx* with an iron *Spatula* while it boileth. All the sharp spirits do stick fast to the the phlegm alone vanisheth by exhalation. When therefore the spirits are wholly con-centred with the and are dried, they are to be put into a close Tigil or Crucible upon Coals in a secret Crucible or melting Pot, then the fire expels the con-centred spirits into a receiving vessel; the which spirits may be used for a new extraction. A fugacious gold mixt with iron, remaineth with the which Calx being reduced in a Furnace fit for those operations, which the *Germans* do call *Stichofen*,

draws out a lead mixt with gold, the which being expelled by a Cupel enricheth the operators with the best gold and silver.

N. B. But if such lead should not contain so much of gold and silver, as that it should deserve a separation by a Cupel, that is again to be mixt with and to be reduced into ashes, and the operation is so long to be repeated, untill the lead being rich enough in gold, may deserve that separation.

The separation is also to be perfected with the Bellows, lest so great a plenty of lead should be melted out of the Tests, which operation requires much fire, yet the lead may be collected or conjoyned in the Test without a wastefull melting, as shall be taught hereafter.

XXXV. *An easie making or composing of Aq. Regis, for extracting of minerals.*

Because a plenteous quantity of spirit of Salt is easily prepared, the Salt Peter is onely to be dissolved therein, and with that solution minerals are to be extracted. For the Salt Peter strengthens the spirit of Salt, that it can so much the more easier set upon and snatch to it the tender gold in those minerals.

The same spirit of Salt, may also without any rectifying be administred for this operation, to wit, such as ascends in the first Distillation.

XXXVI. *Another as yet more easier way of preparing Aq. Regis for extraction.*

Because silver doth always in this operation bewray its being impregnated with gold, which is to be separated by *Aq. fortis*, the solution of silver is also fitly used to extract after this manner.

Pour the said solution into *Aq. Regis* which hath extracted gold, that the silver may attract the greatest part thereof to it self. But the same *Aq. Regis* may again extract other gold, and be attracted by the solution of silver.

But if there should be no solution of silver in readiness, the gold extracted is con-centred with and the operation is perfected by the means or after the manner abovesaid, by driving the spirit out of the and by reducing it in a Furnace, called by the *Germans Stichofen*, as was said before.

N. B. Aq. fortis being dissolved therein, or poured on or into *Aq. Regis*, or the nitrous spirit of Salt, it adds an increase and strength to the *Aq. Regis*, because *Aq. fortis* doth corroborate the spirit of Salt better than Salt Peter.

XXXVII. *How the Calx of silver, which hath fished out gold by Aq. Regis, is to be recovered.*

When the solution of silver is poured into *Aq. Regis*, and the chiefest part of the gold is extracted; rest is so long granted unto it, that the Calx of the silver may settle to the bottom, and afterwards the *Aq. Regis* by pouring it forth is separated, cleared from the Calx of the silver, again to be used for a new extraction; unless perhaps as much of iron had been admixed with it, in which case the white Calx of the silver is put into some Cloath laid in an earthen or glass Tonnel, and hot water is to be poured on it, to take away with it the *Aq. Regis*, which is left in the Calx of the silver. The remaining water is to be pressed out of the Towel or Cloath, and the Calx dried, and reduced in the secret Crucible, or is made use of in the con-centring of into silver or gold, *viz.* gold and silver.

XXXVIII. *After what manner precipitated silver is to be reduced without a loss of its weight.*

Seeing the greatest fugacity is procured unto this Calx of silver, so that its former body cannot be restored unto it in common Crucibles without great loss, this discommodity cannot after a more convenient manner be prevented than by that which follows.

Mix thou an equal weight of with this volatile Calx, and cast it into a close bright burning Crucible, that is narrow above, and broad beneath; the which after thou hast covered with a Cover, and well fenced with the lute of Wisedom, thou shall melt the matter together, nothing whereof shall depart into smoke, neither shall so much as the least of it pierce through the Crucible, and all the Silver which the gold received is by this means attained without any loss.

This silver thou shalt by fusion reduce into grains, and shalt separate the gold from the same in *Aq. fortis*. And thou shalt again apply the silver thus reduced unto a new labour, in which labour thou proceeding without intermission shalt have a continual separatory operation of gold and silver; and this labour thou mayest exercise with great profit in all places.

XXXIX. *Another manner of reducing a fugacious or volatile silver, with greater profit.*

Place thou at the Stern of this little golden Ship, a little fish whose name is *Remora*, that it may be spoiled of its swiftness and may be at a stand, cast this silver little Ship with the little fish *Remora*, sitting at its Stern, into a close and square Tigil or Crucible, that by fusion they may depart into one

body. In this fusion not onely all the silver is returned without any loss into its former body, but also is by the white *Finns* of the little fish, augmented with a certain increase of its weight, and becomes more golden; so that by this additament more of better silver is gotten, than if by the addition of other things it had been restored to its former body.

What other profits any one may be able to obtain through the help of this volatile silver, we will God willing hereafter teach.

These are the things which I at this time have been willing to teach, concerning the extraction of a volatile gold out of stones, and the more poor minerals, as also of the extending or bringing forward silver by successive degrees into gold; of which matter more things shall be spoken in other places.

XL. *An operation, teaching to extract Stones and Minerals, or Mines that are poor in Silver, and Copper by a moist way.*

These matters being made bright burning hot, are to be quenched with water, then moistened and extracted with *Aq. fortis*; after the same manner as was taught above concerning the minerals of gold, and no difference is here met with but in the waters extracting, since gold is extracted with *Aq. Regis*, and silver with *Aq. fortis*.

If the minerals or mines of gold and silver are at once in readiness, the gold is extracted by *Aq. Regis*, and the silver by *Aq. fortis*, and the solutions are to be united, in which dissolving, the silver being precipitated by the *Aq. Regis*, doth also snatch with it the gold from the *Aq. Regis*; and although copper

shall be present with the mine of silver, and it be extracted together with the silver by *Aq. fortis*, yet it is no impediment to the operation, for the silver and gold do sink to the bottom, and the copper is retained by the *Aq. Regis* to be afterwards administred for a new operation, and that indeed as often as any one shall be willing.

The copper is recovered from the *Aq. Regis* by thin plates of iron being put therein, which operation makes the *Aq. Regis* red, and wholly unfit for the like labours.

Therefore the iron being then spiritual, promotes something out of the lead unto the degree of gold, and so the *Aq. Regis* being thus often used, it is again rendred profitable.

XLI. *A more easy manner as yet by far, of plentifully extracting Gold and Silver out of poor mines, as Sand, White-Clay, and other the like minerals, by fire without fusion.*

The mine or mineral *Argilla*, or White-Clay, *&c.* containing a volatile and fixed Gold, being rosted or calcined, and broken in pieces in a mill, fill thou a glass gourd therewith fenced with clay, or made of the best earth, half full, and pour so much of the following *menstruum* on that matter, as that it may be well moistened: but as soon as that *menstruum* is poured thereon, it presently begins to give a smoak, wherefore it is altogether necessary, that thou presently put a head on the gourd or body, which is to be set in sand, and all the moisture separated by distilling, and that while the distillation is performing the gold may be dissolved, but the solving matter it self is to be collected in a receiver

by it self, the which hath the virtues of *Aq. Regis*, and may be again applyed for use, as shall by and by be shewn.

After that all the humidity is come forth, take the gourd (being cold) out of the sand, and pour some water on the matter that it may become soft, and that a Salt may be extracted from it, wherein the Gold lurketh, which was contained in the mine; coagulate the Lixivium being full of Gold, into a Red-Salt, the which by adding Litharge, is to be melted in such Crucibles which are not broken.

The Litharge draws the Gold unto it out of the Salt, which is to be separated from the Lead, after that manner which shall be shewn in the following Chapters or Treatises.

XLII. *The preparation of a Water necessary for the extracting of Gold.*

Take of this water of small charges, which thou shalt prepare plentifully without trouble, pour upon mines, and again separate it by distillation, to be again used in new labours, that there may be no need to prepare it again anew, because this doth not onely alwaies remain effectual, but also is increased in every operation: So that thou mayest be able to extract mines and minerals *ad infinitum*, if so be thou shalt prepare but one pound or pint at the first.

N. B. By this means all Gold how little soever it be, is plentifully extracted out of flints, sand, and any other minerals, without any cost excepting fire.

XLIII. *Another water for extracting silver.*

Take this water extracteth silver out of the poor mines of silver, sand, and stones; the operation of the

same, is like the former one, and its increase is like the increase of the former water, so that after this manner silver may be plentifully extracted out of poor minerals, and no other cost is required besides fire.

N. B. Instead of may be taken since it performs the same thing in extracting, which the other performeth.

XLIV. *Another easie manner of plentifully extracting gold, and silver out of poor minerals, it being of little or no cost.*

Mix thou the mine or minerals with the requisite waters, fill with the same of good earth, set them near each other in a great put it in and distill the spirits, which pay all the charges, and which supply gold and silver without any costs, the which is to be received by lead.

XLV. *Another more easie manner of extracting gold and silver out of minerals.*

Mix the mine or mineral with the requisite waters, and moisten it by degrees, cast the whole into the spirits depart into a receiving vessel, and in the time of distillation, the gold and silver are dissolved by that dissolvant, the which being extracted, remain with or among and are rinced by water out of the mineral, so that they are attained without costs, and the spirits being collected in the receiving vessel, do recompence all charges.

XLVI. *An easie operation of plentifull extracting gold and silver out of fat white Clay or Potters-earth.*

Although gold and silver be extracted out of minerals by moist waters, by a troublesome operation as we have taught in the beginning, yet such an extraction brings no small profit, because they may be freed from those waters by precipitation; and those very waters do readily serve for the making or preparing of Salt Peter. With a fat Argilla or white Clay, the matter goes otherwise, because the spirit hath crept into the fat earth, and scarce a half part is received, unless the earth be first deprived of its fatness by making burning bright, it being that which doth also require its own peculiar labour.

Seeing that therefore in all places of the world, wheresoever earth is found, such fat white Clays containing gold and silver do plentifully offer themselves, and none hath been hitherto found, who hath indeavoured to extract and bring them to use, especially whenas they contain but little of gold or silver, not able to defray the charges of the lead bestowed.

I could not but open a very easie way of performing that thing with no small profit, the which is perfected by the following labour.

Mix such an earth containing gold or silver, with or of that greater one, and cast it by degrees into my first or second Distillatory Furnaces, and draw forth the spirits by distilling, that the solved gold or silver may remain in From that which is broken by a Mill or grinding is washed off with hot water, and is reduced by lead as is shewed before.

XLVII. *After what manner by the help of art, gold may be easily and plenteously extracted from the sand of* Granates*,* Agaths*,* Saphyrs*, and* Rubies*, and other stoney Mineral earths, which do*

neither admit of fusion, nor Lead, nor sharp Waters.

It is certain that all *Granates* or Marbles, the red, black, ash-coloured, duskish, also of whatsoever colour they are, or wheresoever they are found, whether in Brooks or Rivers, or in Sand, or fat Earth, or in high Rocks, do always contain much of Gold, but that by reason of their glassy nature, they cannot be tamed by *Aq. fortis*'s, and by reason of their most difficult fusion cannot be wrought by Saturn or Lead; for that cause they have made none partaker of their gold, and they have been neglected as unprofitable earths, whenas notwithstanding they being handled by little labour, they are able to afford much gold.

Some one therefore may ask, because they cannot be subdued either by lead or *Aquæ fortis*'s, what course must be taken, that gold may be extracted out of their bowels? I answer. and also by a Fusible they may be so overcome, that the gold which they have may be withdrawn from them with profit, for because they can bear the fire, they are and perform by a double labour, one through their sharpness, and another by reason of a strong fire, so that nothing is safe from so great forces, but all things are constrained to yield unto so great violence. Hence they do willingly afterwards enter the Salt of Lead, and in time of melting do readily draw out their gold.

XLVIII. *A most firm demonstration, that sharp Waters and Salts after the manner of the ways hitherto described, do draw forth more Gold and Silver as it were without cost, out of Mines or Minerals containing Gold and Silver, than sumptuous or costly melting Fires.*

It is not unknown to every one that is seasoned but even with a mean knowledge of gold bearing Mines, that without the addition of Lead or other flowable things, Gold can in no wise be melted out of them, whenas therefore there is little Gold in those, and nevertheless much of Lead or other matters is required to be added for an easie fusion or melting sake, who shall be fit for the undergoing of so great costs? Hence it hath come to pass that such poor minerals could bring nothing of profit in common.

It being also granted, that there is so much of Gold and Silver in Minerals, that they will defray the charges of fire and fusion, and afford Gold and Silver with profit, yet such operations are not comparable to my inventions using Waters and Salts, no more than as Water to Wine, or Night to Day.

For first, fusion or melting far exceeds in its costs the extraction which is perfected by Salt and Waters. And then it can never be brought to pass that fusion should expell all the Gold and Silver out of Mines and Minerals, but leaves some thereof in the drosses, next also there is made a loss of all the volatile Gold and Silver, which are cast forth by a most strong fire, and driven away into the air; on the contrary, of the more ample and wealthy profits, which the extraction of Gold and Silver out of Minerals bringeth, this is not the least, that not onely all the Gold and Silver which is fixed, is drawn out without any detriment or loss, but also those two metals being as yet volatile are extracted at once and made fixt and constant in the fire, whenas notwithstanding by the vehemence of a melting fire, they are wholly dispersed and reduced into nothing. For the Waters of Salts do fix the volatile fugative spirits of Gold and Silver, the which by the vehement blasts of Bellows,

are rendred as yet far more volatile, so that by the help of fusion scarce half the Gold is gotten which the extraction by the Waters of Salt affordeth.

Add to this, that not onely all the Silver and Gold, as well the volatile as the fixt is gotten together without any loss, but also the charges of Coals are far less, and one operatour may perform as much of this extraction of Gold and Silver, as three in the labour of fusion or melting.

From hence it is easily to be seen, how much profit and fruit may be gained by this my most excellent invention in all places of *Germany*. For this extraction is not onely for extracting Gold and Silver as well out of rich as poor Mines, but also snatcheth out all the Gold and Silver, in Flints tinged with any colour, wherewith all Brooks, Rivers, and Fields are filled.

Now follow some particular transmutations of the imperfect Metals into more perfect ones, by common fire, and Crude Salt, and by the not common concentred moist fire of Salt.

XLIX. *A fundamental and evident demonstration, that a true transmutation, or trans-changing of Metals may be exercised in all places of the earth, wheresoever Men may dwell, yea in the least Cottages of Countrey folks, and indeed by the same matters and vessels which are found in them.*

It is well known, that even the poorest and vilest or meanest Countrey can want neither fire, nor salt, nor earthen vessels, necessary for the boyling of Meats. Therefore being furnished with Salt, a piece of Copper of some old Kettle shall easily supply him, the which it shall be free for him, by fire and salt to

trans-change into a better and more noble body, but because Man hath a far better and commodious Salt for the transmutation of Metals in his possession, which excells common Salt in its goodness, he may of right and worthily make use of his own proper Salt before a strange and foreign one, and that after this manner.

Boil thy own, or the Urine of another man, to the consistancy of Honey, in which decoction, all the unprofitable moisture of the Urine departs by exhalation, and the Salt thereof remains in the Kettle or earthen Pot; admix thou with this condensed Urine, so much of *Calx-vive*, or the ashes of burnt Woods, that it may come into a thick or gross lump. But thin plates of Copper cut in pieces, and purged by making them bright burning hot ought to be in readiness, and also an earthen Pot having its Cover, wherein let that mass of Urine, and *Calx-vive*, together with the thin plates of Copper be put; when thou hast all these things in a readiness, mix the Urine as abovesaid with the *Calx* or slack-lime or ashes, and fill thy Pot to the height of three or four fingers, upon which put some of the plates of Copper, and so *stratum super-stratum* till the Pot is full, then cover it with its Cover, which thou shalt well fence with Lute made of Meal, Water, and Paper, that not any vapour at all may come forth. For assoon as the *Calx-vive* is mixed with the condensed or co-thickned Urine, the Spirit of Urine begins to operate by its own proper efficacy, and therefore it is necessary that the Cover be straightway laid on the Pot, and be fenced with a due Lute or Clay; the Pot being thus filled and cover'd, set it aside in some certain place for the space of half a year, in which time the spirit of Urine being stirred up by the *Calx-vive*, displays its virtues on the Copper, and exalts it

into a higher degree, as that it is tinged of a skie and green colour mixed, and is rendred fit for the Painters Art; one pound whereof is more worth than two or three pounds of Copper, one pound whereof doth for the most part render one pound with four or five ounces of this colour, and so it affords a profitable transmutation of Copper.

L. *After what manner, out of this partly Green, partly Skie-colour of Copper, Gold and Silver is to be separated.*

He that desires to separate Gold and Silver out of this colour, whereof no great masses are attained, but onely and alone whereby it is demonstrated that the thing may be done, he must use the following operation.

First, he must take good heed in taking the colour out of the earthen Pot, lest any thing of the mass of the Urine, and *Calx* be mixed with the beautifull colour, and render it impure.

The thin plates being taken out, they are to be often crookedly bowed, and moved upwards and downwards, that the colour may fall off from the plates like scales. The remaining Copper which is not yet turned into colour, is reserved for a new labour; to be repeated after the same manner. Wine-vinegar is poured on the colour, or the sharp water of Tartar extracted after the Distillation of adust Wine from its Lees, with water by decoction, and it is to be so long boiled in a Copper Kettle, or an earthen Pot glazed, till all the colour shall be solved; the Solution being cast into a Filtre, the Vinegar or Water of Tartar onely passeth through, and a reddish powder is left in the Filtre, the which being melted with Lead in a Cupel, after the exhalation of the Lead, it leaves a

grain of Gold. For the spirit of Urine hath ripened somewhat of the Copper into Gold, which the Vinegar or Water of Tartar did not dissolve but left, attracting onely the Copper by solution. And because somewhat of Silver is ripened in the Copper through this same operation, and is dissolved with the Copper, by the Vinegar or Water of Tartar, something of common Salt is to be added to the Water of Tartar or Vinegar, that the Silver may not be solved by the same, but may remain with the *Calx* of Gold, and may be retained with the same.

N. B. Pure and clear Vinegar ought to be taken for this labour, if you would preserve the colour unhurt, for after some part of the Vinegar is evaporated away, the green colour of the Copper grows together into fair green small stones, one pound whereof is more to be esteemed than five or six pounds of Verdi grease, which is sold in the Shops.

This artificial operation therefore affords a beautifull and christalline vitriol of *Venus*, and some small quantity of Gold and Silver; whereof although there be not so great plenty that it may bring profit, yet it shews the possibility of the thing, and teacheth that a transmutation of Metals, may be exercised in any small Cottage by any Countrey Man.

But if any one shall collect Urine, and extract from thence the volatile spirit of its Salt by Distillation, he shall far more deeply pierce the heart of the Copper, and shall obtain more of Gold and Silver than he can get by the but now mentioned rustical labour, of which matter more things are found in other places of my Writings.

LI. *After what sort pure Gold may be extracted out of any Copper.*

In all Copper a spiritual occult Gold lies hid, the which in the labour of separation by Lead in a Cupel or Test, is not taken notice of, or considered. But this very Gold is nothing else but the colour of Copper, so firmly adhering unto its body, that it remaineth very difficult to be separated from thence, but the operation being rightly instituted, although it be not gainfull, yet it demonstrates a possibility of the thing, for the sake of experiencing whereof, to wit, whether there be Gold in all Copper, thou must labour after the following manner.

Dissolve Copper in *Aq. Regis*, and pour much water on the solution, that by this water the dissolved Copper may be largely diffused. Into this solution diffused by the water, pour Lead that is dissolved in *Aq. Fortis*, so that one or two half ounces of Lead may answer to one pound of Copper. But as often as the Lead shall settle to the bottom, thou shalt shake or stir it, that the solution may be well mixed, and that the Lead may attract something of Gold; and may precipitate it with it self to the bottom, the which being dried and separated in a Cupel, will leave a small quantity of Gold, not for an argument of profit, but a token of a possibility, which testifies that there is Gold in all Copper. But if any thing of profit were to be received, such Copper was to be taken which was already changed into vitriol. But among vitriols the *Hungarian*, *Cyprian*, *Indian*, *Japanick*, and other the like do excell, which do offer themselves in the Mines of Gold-bearing Copper, and are handled after the following manner.

LII. *The manner of extracting Gold out of natural vitriol.*

Dissolve thou vitriol in common water, and pour on the vitriol dissolved, a littled of dissolved Lead, and

stir both solutions by frequent motions, that the Lead may attract the Gold out of the vitriol, to be dried and separated by a Cupel, which will remain like a grain of greater or lesser quantity, as the vitriol shall contain more or less of the same.

Of the vitriolated water out of which the Gold was extracted, thou shalt again make vitriol by so long boiling, and evaporating till a thin skin appear, which being then exposed to the cold will shoot into Crystals. But this operation brings with it more profit, if it be not now boiled up into Crystals, but that vitriol onely be taken which is drawn out of its Mineral into Water, and after the extraction of the Gold, is at length boiled up into vitriol.

But least this fishing of Gold out of vitriol should seem wonderfull unto any, we will shew a way, whereby Gold may be extracted out of Sea Water, or Sea Salt, the solution of Lead assisting: The manner is as followeth.

LIII. *After what manner Gold is to be extracted out of Sea Salt, or Sea Water, not indeed with profit, but onely that it may be demonstrated, that Gold is hidden even in Sea Water or Sea Salt.*

Fill a great Copper Kettle with Sea Water, and pour thereon a little dissolved Lead; the which goes to the bottom because it cannot indure Salt, and is straightway precipitated into a white powder, move and stir the water in the Kettle often, that the solution of Lead may every where touch the Sea-Salt-Water.

Through this action, a spiritual Gold adheres to the leaden powder, and sinks to the bottom together with it, which powder being freed from its Salt by

common Water, and dried, and melted in a Cupel, leaves a small grain of Gold, as a remainder.

N. B. For this fishing Silver is more fit than Lead.

LIV. *How, out of poor Mines of Copper, from which no profit can be perceived, Copper, as also Gold it self if it be present, is to be easily and without costs, extracted and separated.*

The sandy or sulphurous Mine or Mineral of Copper is to be roasted or calcined, by burning even to the consuming of the Sulphur, because sharp waters do not assault sulphureous matters, the Mineral being calcined and beaten into a powder, fill a gourd, and pour our solving secret on the same, the which I have taught above at the extracting of Minerals.

The whole dissolvent in abstracting or distilling is recovered, and that indeed not without increase. But the Copper and Silver do stick fast in the dissolved Salt, which remained in the Mineral after the abstraction, and the which is to be washed out with water, out of which water, which drew out that Salt, the Gold contained therein, may by the solution of Lead or Silver, be drawn forth.

But if the same water be boiled untill a thin skin appear at the top, and exposed to the cold, it will shoot into a green vitriol, but for the extracting the Copper out of the Salt-Water, Rods of Iron are to be put therein, which do attract the Copper, the which being withdrawn and washed clean, and melted into Copper by fusion, is administred for other uses: For because it is like to a tender and filed powder, it is changed by an easie business into Verdi-grease, after the manner which shall by and by be taught.

LV. *After what manner Gold may by an easie business by Fire and Salt, be separated out of Copper.*

If Gold shall be mixed with a mass or lump of Copper, all the Copper is to be reduced in a bright burning Fire into Ashes: and the Ashes are to be infused in our secret *Aceum* or Vinegar, the which dissolveth the Copper onely by decoction, and leaveth the Gold undissolved, like a shining powder, to be dried and melted with Borace, out of which Gold of twenty three Caracts proceedeth.

That Vinegar, our secret *Aceum*, draws all the Copper from the golden *Calx*. The Copper is separated from the Vinegar by Rods of Iron, being laid therein as we have taught in the foregoing manner.

LVI. *How Copper being extracted out of vitriolated Water, and adhering to Rods of Iron, is to be changed into Verdi-grease.*

This pure Copper may be moistened with the strongest Vinegar, and put into earthen Pots, the which being covered with its Cover well fenced with Clay, are to be placed in Horse dung, and to be left therein for a time, yet so as that the heap of Dung be sometimes renewed. All the Copper is in a short time changed into Verdi-grease, and indeed far more pure than that which is set forth to Sale in the Shops, and which is made in *Spain*, by the husks or pressed out of clusters of Grapes.

N. B. In extracting Copper out of Mines, regard is to be had unto this thing, to wit, that with poor and wild or course veins of Copper, *Lapis Calaminaris*, or *Zink* is sometimes found to be admixed; which is no

ways perceived to be in them. But if those Minerals are extracted with *Aq. Regis*, and this be to be taken away by Distillation, none of the *Aq. Regis* goes forth, but onely a flegm without savour, because the *Lapis Calaminaris* or *Zink* doth retain all the Acrimony with it, just as if those two Minerals should say to the *Aq. Regis*, we do not as yet let thee go, because as yet, we have need of thy indeavour for our amendment, *&c.*

But it is certain that whatsoever Minerals and Metals do retain with them sharp spirits, are as yet immature, and may be ripened by those spirits, that they may bestow Gold and Silver, as hath been already said, and shall as yet more largely be spoken to.

LVII. *Out of wild or course Minerals, or veins of Lead, admitting of no melting, out of which no good Lead, much less Gold or Silver, can be drawn, how to extract not onely Lead, but also Gold and Silver with profit.*

As we have said above, that some Minerals or Veins of Copper do appear in Mines, the which by reason of *Lapis Calaminaris* or *Zink* do refuse all melting, and can be by no fire reduced: So also we here admonish, that Minerals of Lead are found, the which do indeed contain much Lead, but by reason of the *Lapis Calaminaris*, *Zink*, and a sulphureous Sand being admixed with them, they cannot be overcome by any melting, for these matters do take away a ready flowing from the Lead, and do cause that such Minerals, which for the most part together with Lead, do also hide not a little of Gold and Silver, are cast away as altogether unfit, and unprofitable, whenas notwithstanding very much profit might be received from them after this manner.

Let the Mineral by pounding be broken in small pieces, and in my little secret Furnace which I have fitted for the calcining of Minerals, let it be roasted with bright burning Coals, that the gross Sulphur may conceive a flame, and burn. If in time of operation the matter should gather it self into heaps or knobs, and in co-heaping should make round Pellets, it being taken out of the Furnace, let it again be beaten, be set upon live Coals and roasted, and these labours be so often repeated, untill all the Sulphur shall be consumed, and the Mineral doth no longer co-heap it self into knobs, but being made bright burning hot like dead ashes; it no longer sends forth a sulphureous stink. At length out of these ashes being well washed, a dead and unprofitable matter separates its self from the good and metallick earth, the which being melted by it self in a Furnace called by the *Germans Stichofen*, becomes a flowable Lead which containeth Gold and Silver.

But if the Mineral be so stubborn that it altogether refusing all melting, could not by it self be reduced, and nevertheless contain Gold and Silver, something of Litharge is to be added to that metallick earth, which procures a flux unto it, and yields that Gold and Silver bearing Lead, which by the common operation wholly refuseth to offer it self.

LVIII. *Another way teaching by the help of Salt and Fire to draw Silver and Gold with great profit, out of all stubborn or rude and untamed metallick earths, in whose Veins Lead, Copper, Gravel, or course Sands, Iron, or* Lapis Calaminaris *have for the most part conjoyned in Society, and which do deny all profit by vulgar operations.*

As Fire burns up every gross and combustible Sulphur

in Mines or Minerals, that these do at length subject themselves unto melting, and do render Metals easie to be hammered: so also Salt fixeth, and makes constant whatsoever volatile body endeavours to flie away into the air, that it may afford a ripened, melted, and profitable Metal. For that cause such Minerals common Salt being added as was abovesaid, are to be roasted in live Coals, that that devouring gross Sulphur may vanish by burning with a flame, and that together also the Metal it self may be promoted to maturity, and so that by this very thing, good Gold and Silver may be separated, whenas notwithstanding otherwise, not any one should obtain so much as the least thereof out of these very Minerals.

Such an amendment and changing the more imperfect Metals into the more perfect ones, may be attained by the help of Salt and Fire.

If therefore common Salt and gross Fire are able to perform this in Minerals, what shall not these, not common but secret Fires of Salts effect, in trans-changing Metals already pure, into more pure and subtile ones?

LIX. *After what manner Metals are to be amended by pure Fire, or the fiery spirits of Salts.*

It may easily be perceived if a gross Salt and Fire do some good to more gross Metals, that also a more pure Fire and Salt may do more good on purer Metals. Instruments whose edges are made very sharp by whetting, are far more fit for operation than those that are dull, and will perform more. By how much the sharper an Auger or Wimble is, by so much the sooner it boareth thorough the Wood, and on the contrary, by how much the more blunt it is, by so

much the slower it pierceth thorough.

He that is earnestly desirous to obtain any good in the amendment of Metals, he must of necessity apply the subtile and strong spirits of Salts, that he may destroy Metals with the same, may kill them, and reduce them unto their former life, and so may procure more noble bodies unto them. When their former body is restored to those moist and cold Fires of Salts, to wit, that they may return unto the form of Salt, but of a more noble and subtile one, Metals may far more speedily be destroyed; a double Fire performs more than a single one, since therefore Salt is by it self no other thing but a meer and concentred Fire, and the Fire of Wood or Coals joyning it self with the other a greater efficacy must needs be expected from them than by common Fire alone, but we have hitherto made mention of such operations, and therefore its needless here to repeat them. From what hath been hitherto said, every Chymist may gather and learn those things which concern the amendment of Metals, wanting the help of Salt and Fire; more God willing shall follow.

LX. *Let us now ascend higher, and demonstrate what incredible miracles or wonders our secret Fires of Salts may effect nigh to that great work of Philosophers.*

As in the foregoing Chapters it hath been sufficiently confirmed, that unripe Metals may by the help of Fire and Salt, be particularly promoted to a more perfect maturity: So also in the multiplying of Animals and Vegetables, that thing evidently appeareth; to wit, if sufficient meat and drink be administred to any Infant, that he groweth dayly in bigness, and strength of body, untill he come to the

age and perfection of a Man. The same multiplying in Vegetables offers it self to our view, in that a small seed or root do snatch to them their nourishment from an earthly Salt; and the beams of the Sun, and do rise up into a perfect, great, and fruitfull Tree. This particular transmutation is conversant before our eyes, and therefore is a thing most known, but after what sort the most noble part or purest essence is to be extracted out of the bodies of Vegetables, Minerals, and Animals, that other more weak bodies may be strengthned and amended by the same Philosophers have always hidden and covered with the greatest endeavour. Hence it is, that there hath been very few, and as yet are, who have had the knowledge of this highest Science.

As to what therefore belongs to the great work of the Philosophers, all the Philosophers do in their writings with one accord affirm, the which I do also in all my writings affirm to be most true, and do as it were shew with my Fingers, to wit, that nothing in the nature of things doth effect a Tincture and Tinge with a most gratefull colour, but Sulphur alone, and that one onely, and that this same combustible immature and volatile Sulphur is fixed and changed by the operation and help of Salts into a true Tincture, the which is as certain as that which is most certain, and yet laborious also, and requiring a space of time long enough, especially if any one doth insist in a moist way. The way of coming unto the end of such a work as I think, yet with the safety of others judgment, this is the best, if any one bind or fix such a Sulphur, which was already brought unto a perfect maturity by nature, they might bring this profit with it, that it should not require a longer time for its maturity.

But such a fixed and tinged Sulphur, is no where more nearly found than in Metals, and especially in Copper and Iron, but the better and more pure in Gold; the finding out whereof notwithstanding (by reason of its most firm and intimate conjunction with its body, as also its separation) hath been always esteemed almost impossible. For unto diligent searchers, a true separator which might separate the pure part from the impure, hath for the most part every where been wanting.

For as it is known such a hard or compacted metallick body, can very difficultly be separated and divided into its parts.

The solution of sharp waters, sups up indeed every Metal, but it effects no separation. For because Metals are Homo-geneal things, and the metallick Sulphur is so strictly bound to its metallick mercury, by the bond of the metallick Salt, it can never be brought to pass, that by such solutions, or by precipitatings, or by other ways, one part should be separated from the other.

If a Metal being dissolved by a water be precipitated all its parts being so mixed as they were before its dissolution do fall down and settle, and admit of no separation. But if any one would also render Metals spiritual, that so the more pure parts might be disjoyned from the more impure ones by distillation, yet there is no separation made, but the more pure body it self ascends, and again as before, it consisteth of three principles, performing indeed more in Alchymy and in Medicine than the more gross bodies of Metals, but is unfit for a true Tincture, because nothing operates in all bodies, but a lively Soul, and that which vivifies or quickens other dead bodies, for it is the spirit, as Christ saith,

which quickneth, the body is unprofitable. Let man, or any other living creature be for an example, the which as long as it lives, it moves it self and operates as long as the spirit, the Authour of Life is present with it; but that vanishing away the body wants all motion, and remains a dead Carcass. If now it could be brought to pass, that we could lay hold of such Animal Spirits, and could render them corporal ones, we might also perform incredible things by the same, and perhaps fashion or form a living creature of a lump of earth, the which notwithstanding God hath reserved to his own self. But this that bountifull Father hath granted unto us, that out of unmoveable subjects, or those wanting a moveable and animal life, we may extract their pure Souls or Essences, and render them corporal, and effect thereby things of great moment in Medicine and Alchymy.

But the souls of Metals do excell herein, as being more fixed and constant than the essences of vegetables, but they are far more difficultly attained. For the souls of vegetables do suffer themselves to be easily extracted, but the colours and souls of Metals do hardly admit of extraction, and for that cause are accounted of by the ignorant for a thing impossible to be done, nor indeed is it altogether without some cause; for the separation of the tinging soul from the hard metallick body is a thing of great moment: many are the ways that have been attempted for the procuring of this Sulphur; and some ignorant fellows have written Books, of the acquiring or getting of the same, whereas 'tis evident that they never saw such a Sulphur.

The most learned and most witty *Helmont* wrote egregiously concerning this Sulphur; but yet not so clearly as that any one could out of those his writings

get a perfect knowledge of the same. Nor indeed is it expedient that such kind of Pearls should be cast under the feet of swinish Men. There is no Writer (as far as I know) that hath mentioned any thing concerning this matter, clearer than *Isaac Holland* in his *Ch. De Amausis*, where he teacheth, that he who hath gotten the art of changing Metals into transparent Glasses with their peculiar colours, hath purchased a notable secret in Metallick affairs. He alludes (by way of likeness) to the bodies of Men brought to a clarity or brightness after this life, and thus declares his Doctrine and says; The souls of Metals do shine forth through their *Amausa*'s, or clarified bodies, clad in their proper colours, even as the Souls of Men shall hereafter shine in the other World, from [or through] their clarified bodies. And further he saith, that when such *Amausa*'s [or Glasses] are reduced into their former bodies; then the *Amausa*'s of Copper and Iron become fixt, that of Silver becomes Gold, and that of Gold becomes Tincture. The Said Authour hath not clearly expressed the manner of accomplishing this, but in my opinion (without prescribing ought to any one) this is the nearest way of attaining to such an operation, *viz.* of getting the souls, or the pure Sulphurs of Metals, *viz.* If the Metals be first reduced into *Amausa*'s, or transparent Glasses, out of which their souls are easier extractable than out of their gross bodies. But now, for such an extraction here is such a *menstruum* required as doth not work upon all the whole body, or dissolve it, but doth onely attract there out of the colour and purest Sulphur, and leaves the body behind white. But where shall we find the description of such a *menstruum*? none speak of it openly, but many mention it obscurely; nor indeed is it so necessary that such an *Arcanum* of so

great moment be manifested to every one.

But however, this in brief you are to be admonished of, that like draws its like and extracts it. If a mercuriality be to be extracted out of the metallick masses [or bodies,] then 'tis expedient to use a mercurial *menstruum*, for like rejoyceth in its like. So sulphureous essences are extractable by sulphureous *menstruums*, and not by mercurial ones. For Water doth willingly associate it self with Water, and Oyl with Oyls. And forasmuch as all the Philosophers write that the Sulphur or tinging Soul in Iron and Copper, doth as to goodness and nobleness equalize the Sulphur in Gold, it will be needless (in my opinion) to take Gold, but to bring Iron and Copper to that pass, that they may become transparent Glasses, from which their colours may be extracted. But if so be that any one is minded to prefer Gold before these, and to extract the tincture hence from, he may do as he pleases, and will find in many places of my writings a manuduction, [directing him] to the transmutation of Gold, (and so of the other Metals too) into transparent bodies, which thing is highly necessary. For there is not an easier way of extracting the tincture out of Metals, than by first reducing them into transparent *Amausa*'s. Now the *menstruum* serving for this extracting of the Sulphurs out of the metallick bodies is to be so prepared, that it dissolve not the body, but extract onely the Sulphur or pure Soul there out of. Such *menstruums Paracelsus* himself makes mention of, and affirms, that with them the skie-coloured Saphyrs, the red Rubies, and the yellow Jacynth may be so deprived of their colours, as that there remains no more of them save onely the white bodies. Besides, that white Crystals may (by the help of tinging sulphureous Spirits) be died with various

colours. Verily 'tis a secret of most mighty concernment, to have the skill how to prepare such a *menstruum* as will penetrate the most hard Stones and most compact Glasses to extract them, and withall to communicate to othersome various colours, without the corrupting, breaking and destruction of any of the bodies, the which thing seems in my opinion very likely to be true, though as yet I know not how to do it. That which I have tryed by my operations I can write and teach, *viz.* how all the Metals may very easily (yet one more easily than another) be changed into fair transparent and most delicately coloured glasses, and how out of these glasses the pure and tinging metallick souls may be extracted, *viz.* by such *menstruums* as are sulphureous, subtile, not dissolving, but onely extracting.

But for as much as these kinds of *menstruums* are not (as far as I know) described by any one, and yet are the producers of such notable effects; I could not omit the discovering of something concerning them, for the sake of such as are Students in true Philosophy, and after some sort shew that kind of extraction, which is to be accomplished by the help of our con-centrated spirits of salt, or of our moist Philosophical fires.

LXI. *How a vegetable subtile sulphur is to be so actuated by the nitrous moist fire, that it may extract the fixt sulphur of metals, or their pure tinging soul.*

First of all, the oyls of the vegetables are to be exalted by distillations, and often repeated rectifications to the highest degree of purity and subtilty, and afterwards to be once rectified by some con-

centrated nitrous fire, that so being already of themselves subtile, they may get a fiery vigour endued with a faculty of seizing upon metallick sulphurs, and of extracting them out of the hard and compact bodies. For any vegetable oyl how subtilly soever it be prepared, hath not any power of entring into the metals, and much less of having any ingress into their glasses, nor can it extract in the least, though such bodies should be covered with it for a long season. But now if an artificial operation shall have sharpenedw such an oyl with those most subtile spirits of salts, and have rendred it more acute and penetrative than those con-centrated spirits of the salt do lead in the sulphur, and bestow on it a power of attracting to it self its like.

And albeit that such con-centrated spirits do when *per se*, and alone, wholly dissolve metallick glasses and make no separation at all, no, nor do not extract the least particle of any sulphureous substance, yet the case with them is vastly altered, when such fiery spirits are artificially united with most pure sulphureous oyls; insomuch that they bestow on them a faculty of working upon metals, and of extracting from them a most pure sulphur; nay farther, they purchase these oyls a capacity not onely of extracting the colours out of metals, but also out of other things. Now we have taught at large in our second part of Furnaces, the manner of rendring the oyls of vegetables subtile; and as for the nitrous fire requisite to this operation, the way of con-centrating it is to be found in this Book a little before, so that 'tis wholly needless to repeat the same things over again which have been afore treated of. And thus far is my knowledge come, *viz.* how (by the help of oyls animated and actuated by the aforesaid means) to extract the most pure soul out of metallick *Amausa*'s,

or those hard and glassy subjects: But how such a sulphur is to be brought into a tinging medicine, I (professing not my self so great a master) do not as yet know. Neither is it at present needfull to exceed the due bounds by so large a treating of such worthy things; for things wonderfull may be effected by this *menstruum* both in Medicine and Alchymy, and in other arts, concerning which we shall (God willing) presently add somewhat more.

And whereas I have made mention here of clarified bodies, and con-centrated spirits; I judge it worth while also to shew what difference there is betwixt those con-centrated spirits and clarified bodies as the Chymists call them.

The clarified bodies therefore are nothing else save bodies purged and mundified by the operation of the fire. For the fire is the ultimate examiner of all things, as being endued with such a power by which it burns up all things, reduceth them into ashes and powder, and out of the ashes makes glass; that being the utmost or ultimate thing whereunto all things are reduced. If therefore there be in any thing any good, which being burnt in the fire is by fusion or melting, turned into transparent glass, it doth manifest it self in its utmost or ultimate essence, and shine forth in its brightness, insomuch that every one may see what lay hidden in its life afore thus burning it. For example, I take wood, an herb, or an animal, I burn it and transmute it into ashes; these ashes I melt and turn into glass. Having thus done, there appears no colour visible, for the glass is white, and that because the sulphur is consumed in the burning; and the mercury is fled away into the air in smoke, as being two principles which are no ways able to resist the force of fire: But the salt, as being a contemner of the

fire remained in the earth of no efficacy.

But now a metal being by the fire turned into ashes, though part of the sulphur and mercury hath in the combustion and vitrification flown away into the air, yet notwithstanding the best part remains; and this is the reason why such metallick glasses are coloured according to the metals nature and property, and which (afore thus burning it) was hidden. We will yet farther evidence it by an example.

If I burnt copper or iron, and reduce it into ashes, and do by melting it turn it into glass, then the copper if *per se* and no other thing added unto it, yields a green glass, and the iron yields a yellow coloured glass. But if there be made an addition, then are produced glasses of other colours, as for example.

If I add to burn iron or *crocus martis* the glass of lead, then the glass made by melting will have the yellow colour of a Hyacinth. The same *crocus martis* being molten with common glass, made of wood-ashes and salt; yields a greenish coloured glass which is the natural and proper colour of the iron. For the lead altered the colour of the former mentioned glass of the iron and made it yellow in the melting, and so hindred it from manifesting its true and natural colour. The glasses of two several colours being molten together do exhibit false colours, as may be seen by co-melting a skie colour and a yellow glass, the which being molten together yield a green colour, and doth so represent it self both in the fire and out of it too. From hence took I occasion to write and teach the way of finding out (by molten glasses) what kind of metal is hidden in any mineral or metallick earth. Which way of proving mines or

minerals is far better and speedier than that which is usually done by a decoction and exhalation of lead in the Cupel. Thus may you mix five, six, eight or ten grains of some finely powdered mineral, with one or two lots of Venice glass being of easie fusion, and put the matter thus mixed in a well covered crucible, and by melting it reduce it into glass. The colour which will be in the said glass, will shew what metal the *minera* contained: Lead will yield a duskish colour, tin, a white, copper, a Sea-green; iron a somewhat greenish, silver a yellow, and gold a skie coloured: each of which colours is the true and internal colour of the respective metal. Gold doth also resemble a Ruby as to colour if other colours be added thereunto. But yet in the mean time, the skie-colour is its proper and natural colour, and so is yellow of silver: and this is notably agreeable with the truth, though to such as are ignorant, it seems a thing wonderfull, for indeed such mens knowledge ends in external things, but they are wholly ignorant of internal ones. But now the colours of gold and silver are better and more perfectly known, if there be added unto them some fix and white sulphur, which prevents the gold and silver from being thoroughly reduced into their peculiar bodies by fusion. If the *Calx* of gold or silver be molten with Borax, they both return into their former bodies, and do not pass into glass any ways coloured: But that some glass of easie fusion be mixed with those *Calx*'s, together with a little powder of flints and so molten, then the flints will (by reason of their sulphur) hold with themselves the gold and silver and so keep them that they admit not of fusion [or reduction] in their whole body, but do remain in the glass with some part of the metalline property which renders their internal colours visible, which else would not appear

to sight.

N. B. If you have the minera's of gold and silver at hand and melt them with glass, their colours will also appear, because that in the minera's there always is some sulphur that hinders the metal from wholly returning into a body, so that some part of it abides in the glass and therein shews its colour. This also is to be minded, that if haply some minera or metallick earth contains not one metal barely, but 2 or 3 more metals, then always that metal of which the most quantity is in the said minera doth after fusing shine in the glass beyond the rest. As for example.

Suppose I would make tryal in the red Granates [stones] I powder some eight or ten gr. and mix them with one lot of white Venice glass finely powdered, and I melt them, and so turn them into glass. Now in this transmutation the glass doth not become red, but of a delicate grass colour, and so teacheth me what metals are hidden in those Granates, *viz.* copper and iron, and also more of this, [*viz.* the iron] than of the other. And though there should be some gold too, yet is it unperceiveable because of the predominancy of the iron over the copper and over the gold: For (in this operation) that metal onely manifests it self to sight, which is in greater plenty therein than the rest be.

Isaac Holland would by this vitrification signifie unto us, that after this life, *viz.* when the world is consumed with fire, there shall arise from the bodies of men reduced into ashes other clarified bodies, and of such and such colours, according as their souls have (either good or bad) framed, or as it were made unto themselves in this life-time in their gross bodies. What other thing [I pray] are fair colours,

but the virtues of those subjects out of which they emit or send forth their splendour.

Take a similitude hereof from the melting of minerals, wherein though a mineral of silver or copper hath in it much silver or gold, yet if the superfluous sulphur be not (before the melting the said mineral) separated by a little as 'twere roasting fire; but be (together with that gross sulphur,) set in a vehement melting fire, there will not verily be any metal gotten hencefrom, but that stinking sulphur would transmute the good metal into black Scoria's. So likewise, no fair and transparent glass can be (by melting) made out of pure metals, if that kind of gross sulphur should adhere unto them.

These few things touching clarified bodies, I could not pass over in silence, and much less could I omit this, *viz.* that the bodies of all things may be much better transmuted into clarified bodies by our secret fire, than by the common fire. For the common fire drives away the volatile parts, whereas on the contrary, our fire doth preserve them and renders them fixt and transparent as well as the other parts. And therefore of necessity these bodies must needs shine with fairer and brighter colours than those others, in which the common fire hath expelled the mercury and sulphur, and left remaining nothing else but the salt.

But now as concerning such a transmutation into ashes by our moist and secret fires, any one may easily guess the way. For whatsoever is put in them must be necessarily burned into ashes, and they far better ashes too than are made by burning in the common fire. For if the common fire burns any herb or wood into ashes, the sulphur burns away in a flame, the mercury betakes it self to its wings and

away flies it, and the salt abides behind in a few ashes or a little earth. Now our Philosophical calcination takes away nothing but conserves all [the princip'es so called] together; and doth in the first place produce to view a black coal, then afterwards other various curious colours, and then a white colour, and at last to compleat the operation, it yields a red fusile and medicinal stone.

N. B. Here it is to be noted that for preparing a pure medicine, a pure subject is to be made use of; for if so be that any one would endeavour the transmutation of an herb, wood, or any animal into a medicament by the help of the secret fires, then all the ashes and feces which were in the herb would also adhere unto the medicament and would render it impure, therefore necessity requires that you do not take the whole herb, or the whole animal, but onely their essential salt, the which being void of feces consists onely of the pure principles of the herb; and doth easily admit of being transmuted into a red tinging, and more soluble stone than the herb it self with its feces by it, doth.

I would not have you to account of these things here delivered you as if they were of small moment. No, for they are such things as cover over with this their vile or base covering, such matters as are of great weight, and which will not come to every bodies knowledge. Surely 'tis a considerable thing that a part of any vegetable, animal or mineral body should (by conserving all the most volatile parts, and by rendring them altogether constant and stable, without the least loss of weight) be ripened into a fixt soluble and tinging red, and medicinal stone. This way of transmuting all things without loss of the weight thereof into clarified bodies, is of all others

the best. And those bodies on this wise clarified are without doubt of greater efficacy than are the gross bodies themselves of the animals, vegetables, and minerals, which do as yet abound with their gross and impure feces.

But if so be any one be not herewithall content but panteth after higher things, he may advise with himself about extracting the soul out of this red and fixed stone, and reduce it again by a reiterated operation unto the form of a stone, whereby he will without doubt make it yet far more effectual. And by how much the oftner any one shall repeat this same operation, so much the more effectual a medicine will he obtain, for it will at every reiteration notably augment its virtues, for by such actions the efficacy and virtues of things are con-centrated and driven into a very little compass, wherewithall wonderfull things may be performed.

We are yet moreover to see what spirits are, but principally what con-centrated spirits are, and what they are able to do.

And because the matter in hand gives occasion of treating thereof in this place, we will briefly give you a declaration of the same.

LXII. *What spirits are, and by what means they operate good or evil.*

In the first place, there are spirits called vegetable ones, *viz.* When vegetables are beaten to pieces, and being contused are moistened with water, (provided they have not juicyness enough of their own, or do altogether want it) and so fermented, being fermented they are to be distilled, which distillation brings forth subtile and efficacious spirits, and such

as are the effecters of many profitable things in Alchymy and in other arts, besides the use thereof in medicine.

Secondly, sundry and divers spirits are also made out of animals by distillation, as out of Blood, Urine, Hairs, Horns, Hoofs, and such other parts of animals, also which spirits have their use in Medicine and Alchymy.

Thirdly, there are also spirits which are expelled, or forced out of minerals and metals by the force of fire, but principally out of Salts, as Vitriol, Allum, Salt Peter, common Salt and such like; of the preparations of which kind of spirits, the Books of Chymists are full, and therefore stop us from the superfluous repetitions of the same. But as for the concentrating of them and the utility of them, it hath been already described by us.

I hereby give occasion for all the diligent searchers after true Medicine and Alchymy; to contemplate, what may be effected in Medicine and Alchymy, if those fugitive spirits were, by our fixing and moist fires which separate not any one part from each other, but do fix all the parts together, deprived of their volatility and made fixt. These few things we were willing to mention concerning the spirits which are subjected to a Man's power and are within his reach, and serviceable for the use of mortal Men.

LXIII. *The particular medicinal use of the con-centrated spirits of salts.*

We have heard that the con-centrated spirits or moist fires of salts do reduce all things into a *Calx*, after a Philosophical manner, without a forcing away of the mercurial part, and a burning up of the sulphureous:

insomuch that (by conserving, altering and bettering) they fix the whole. Being therefore compelled by a love to my neighbour, I have a mind to set down in this place some medicaments, as well universal as particular; but yet so as that they may not fall into the clutches of [my] unworthy enemies, but may be reserved onely for friends.

And first, here shall be a medicine mentioned, that amendeth the weak digestion of the Stomach.

Take out the teeth of a Wolf or a Dog when he is half dead, (being first shot with a Gun) and pour thereupon two or three parts of the con-centrated spirit of salt in a Cucurbit, set the glass upon sand that it may be heated moderately, whereby the oyl of salt may dissolve them and bring them into a thick pulse or mash. Upon this mash pour warmed water that so all the Acrimony of the spirit of salt may be separated therefrom, and that there remain onely the white pulse, wherewith (because some of the oyl of the salt doth yet remain, and is not washable off wholly with water) a little Sugar-candy is to be mixed, that so that remaining Acrimony may be allayed, and the pulse be the pleasanter for your uses.

LXIV. *An Antidote against Poyson.*

The teeth of a mad Dog being prepared after the aforesaid manner, do yield an Antidote against Poyson. And indeed so do the teeth of all Animals, but especially the teeth of Stags and their Horns, do (after such a preparation) resist all Poysons.

LXV. *What Beasts they are whose Teeth and Horns doe (as to medicine) exceed the rest.*

The teeth of all ravenous animals, as likewise of Sea-monsters, and their Horns, are of great use in medicine; as of *Wolves*, *Bears*, *Lynxes*, *Tygers*, *Lyons*, *Leopards*; and as to the watery animals, *Crocodiles*, and such like ravening fishes, whose horn, teeth, and scales, and likewise the claws of Birds of Prey, may be by the con-centrated spirit of salt, converted (after the aforesaid manner) into good medicaments.

LXVI. *An experimental discovery of what Vermine are fit for the use of medicine.*

Take strong and well rectified spirit of salt, or onely a strong *Aq. Fortis*, put thereinto your Vermine, of what kind soever it be, and it will presently endeavour to get out assoon as ever it feels the said moist fire. But being it cannot get out, it will struggle till it dies. Now by how much the longer the worm or flie liveth in the *Aq. Fortis*, by so much are its virtues in medicine greater, and this may serve as advice to every one. As for the way of preparing medicaments out of Bark of Trees and Husks shall be mentioned by and by.

LXVII. *An experimental discovery, of what Herbs are profitable for Medicine, or unprofitable.*

You are to make use of the way but now mentioned concerning Vermine, and such Herbs as thou knowest not, or such whose virtues are to thee unknown, put (one after another) into the moist fire; and that Herb which is of a slower solution, excells that which is sooner dissolved, both in strength and virtues. For example, Lettice, Purslane, Mellons, Cucumbers, and such like waterish Herbs, (and so is it with fruits too,) have a moist nature, and are presently turned into water by those fires. But

Rosemary, Sage, Thyme, Dodder, and other hotter Herbs, require a longer time for their solution. Ginger, Pepper, Cloves, Nutmegs, Cinamond, Cardamoms, Zedoary, *&c.* do require a yet longer time as to their solution, afore they will thoroughly pass into a water. From hence may any one know the nature and properties of Herbs very easily. This also is to be observed, that the Medicine out of a Vermine, or out of any Herb, is by so much the more efficacious, by how much the vehementer venenosity it abounds withall.

LXVIII. *The manner of preparing an effectual medicament out of venemous Vermine and Insects.*

I have taught in the second part of my spagyrical *Pharmacopœa*, a way of correcting venemous insects by the fixt Liquor of Niter, and of transmuting their venome into an effectual Medicine, which [way of preparation] he who is studious of good medicaments will there find. But now in this place is taught, by what means such like Vermine, and such Herbs as abound with Venome are to be corrected by the con-centrated fire of salt, and to be turned into excellent and penetrative medicaments. The operation whereof is thus.

Pour into some glass vessel, one, two or three ounces of our con-centrated fire of salt, then put thereunto such Vermine as you would prepare your Medicine of, one after another, provided that you do not put more in, than the said fire is able to dissolve and consume. When all are dissolved and converted into water, all the poysonousness is lost [or gone] and they become good medicaments.

LXIX. *The manner of separating the medicament*

made of Vermine dissolved by the moist fires.

There is found to be a great difference amongst Vermine and venemous insects. For some of them are of a dry nature and property, some of a moist, some of a fat and oily nature, insomuch that it is altogether needfull to make a due distinction of their natures. Such insects as be of a dry nature as Cantharides and such like, are to be used in the form of a salt. The aqueous Vermine, as Earth-worms, Spiders, and such like; they exhibit their medicinality in the form of a Liquor: The Balsamick Vermine, as the May-worms, and others of that kind, do (beside the medicament they afford) yield also a fat and Balsamick Oyl; and indeed (both for external and internal medicinal use,) much more effectual than the Liquor it self.

But that the thing may be the better understood, I will here set down an operation, which every one may follow as a leading Star.

LXX. *How the operation in dealing with all kinds of Vermine is to be used.*

Take some ounces of May-worms, put them in a glass, pour upon them so much of the concentrated spirit of salt, that the Worms may be well covered therewith and be by little and little dissolved; after that they are wholly dissolved, put the solution into a separating glass, shut the mouth of the glass with your finger, then turn the glass upside down, keeping it so long shut with your finger, till all the fat oil swim at top of the Liquour. Then take away your finger that the Liquour may run out, and when the oil comes, shut the mouth of the glass again with your finger, and let it run out into another glass. Keep this Oil or Balsam as a precious treasure, with

the which thou wilt perform wonderfull effects in the curing of diseases, but principally in the Gout and Stone. But yet thou wilt get but little oil from these Worms, and when you put them into your dissolving Liquor, you must have a care that you do not touch them with your hands, but take or catch them with a small Forceps, and so put them into your glass. For they have in them this property; if you touch them with your hands, they presently colour them with their fat Balsom that they cast out, which somewhat resembles the smell of Musk. As if they should say, *Pray let us live, for we give thee all we have: Take this Balsom and make use thereof for the curing of incurable diseases.*

Some men studiously carefull in such affairs have gathered this Balsom, and have found it to be far more efficacious than the Worms themselves, yea indeed too strong, because they were ignorant of the way of correcting it.

LXXI. *The separation of the medicinal Liquor from the moist fire, after the separation of the Oil.*

As concerning the Liquor from which the Balsom is separated, *viz.* the medicinal parts is very hardly separated without a mortifying of the moist fire; therefore the moist fire of the Salt is to be killed with a contrary fire, that so the separation that is required may be made; and 'tis thus to be effected.

Filter the Liquor consisting partly of the dissolved Worms, and partly of the fire of salt, that so it may be rendred clear, and free from the Coals or Husks of the Worms, it haply there be any of them remaining undissolved. And if (by reason of the too much fatness) it be very difficult to filter, pour thereunto so much common water as to make it thinner, and

more ready to pass through the Cap Paper. Into this thus cleared Liquor, drop the Liquor of Salt of Tartar, and it will kill the sharp fire of the salt; so that there will arise from the fire of the salt and from this Alkaly-salt a salt of a middle nature, and concreting into Crystals, and will leave the other part in a liquid form; the which said part will be either white or yellow according as the saline fire which you made use of, is. Now this Liquor is more virtuous than the concreted salt is, as being that which contains the essence of the Worms, which doth not congeal or shoot with the salt, but abides in the form of a Liquor. Experience will teach the business more largely.

Now such qualities as these Worms had afore their preparation and as yet not deprived of their Venome; the same do they obtain after their preparation, but with this provizo, these qualities are safely used, which afore were hazardous. But now the properties of these Worms are these, they do not onely draw out of the body all podagrical humours, but also expell the Stone out of the Reins and Bladder beyond all other medicaments; and besides, do cure other such like diseases as are meerly unknown, and are adjudged plainly incurable. More, it wholly takes away that volatile Gout, which runs wandring through the Members of the Body. But here ariseth this Quæry.

LXXII. *Whether or no every moist fire of salt is also fit for this labour?*

For answer I say, that indeed this very labour may be accomplished by any moist fire; whether it be prepared out of vitriol or common salt, or salt peter. But withall I affirm, that there proceeds a great

difference from those salts. For the con-centrated spirit of niter, doth (after its being mortified with a fix salt) shoot into salt peter. The con-centred spirit of salt, shoots into square Crystals. The same doth oil of vitriol and salt of tartar. But the salt that is in this operation made of the common salt exceeds the others, as to sweetness. That which comes from vitriol, doth beget a nauseating by reason of its bitterness; and that which ariseth of salt peter is of a middle nature. But yet they do all three of them enjoy a laxative and purging faculty; and likewise provoke Urine either stronger or weaker according as the Vermine are, which these said fires have been used in the dissolution of.

N. B. That the operation of the Liquor doth always exceed the virtues of the salts. When the sharp spirits of salt are not mortified with a *Lixivium* of Tartar, but with the spirits of Urine or of *Sal. Armoniack*; the salt and liquor become far stronger, than when the precipitation is done with Salt of Tartar. For the spirit of *Sal. Armoniack* doth for the most part precipitate the dissolved and corrected Vermine into a Powder, which being washed off with common water, and freed from all Acrimony or sharpness is used in medicine, in a dry form. But this, the *Lixivium* will not do, but always conserves the Vermine in the form of a liquor.

LXXIII. *Question. Whether or no there may be any more or any other usefull things learned from this solution of venemous Vermine?*

For Answer. Yes, for this operation doth not onely teach the good and bad properties of all Vermine, but doth withall evidently demonstrate, that every animal of what kind soever, (yea and Men

themselves too) when they are put into such an agony and perceive the approach of death, do discover and clearly evidence the internal motions of [their] nature, which they have (in their life time) been indued withall.

LXXIV. *The way how to know the internal nature of every Worm in the earth, Fish in the water, Birds in the air, yea even of Man himself.*

Take a *Scarabæus* or Beetle, either such a one as lives in Horse dung, or else one that is of a coppery colour, put him into a glass wherein is some *Aq. Fortis*, and you shall see that in the utmost necessity [or last agony] of death, he will not endeavour to get from out of the *Aq. Fortis*, but will strive to hide himself in the earth according to his innate property. But whereas the bottom of the glass is too hard for him to get thorough, he will be so long endeavouring to accomplish his desire, and in striving to get through the bottom till he dies. From hence may it be perceived what his ultimate refuge [or shift] is: *viz.* to endeavour the shunning of his approaching death, by sheltering himself within the earth.

If you put a flie in the *Aq. Fortis*, she will not go to the bottom but will do her utmost to get out at top, because her living is in the air, and so all volatile or flying things are wont to do. As for a fish if it be put to its shifts, it endeavours to shun the danger by betaking it self to the bottom.

In such a kind of manner doth the nature of men become apparent, when they are reduced to the extreamest of difficulties. A godly man, whose thoughts are in this life time always upon God, will constantly adhere unto him in his Agony, and being upon dying will betake himself to him for his refuge,

in whom he hath at all times built his hope, and waiting or looking for help from thence, from whence he hath always hoped for it.

But the ungodly Man who hath never in his life time feared God, nor set him before his eyes, but hath always yielded himself with his thoughts unto the will of Satan, he will very hardly implore (in his greatest anguish) the help of any other than of him, to whom he hath (in this life time) adhered in all his thoughts and actions.

LXXV. *The preparation of good medicaments out of venemous vegetables, by the con-centrated spirits of salts.*

We have hitherto taught, that our moist fires of salts do indeed destroy all things, but do not burn up, or force away ought of such things as the common fires are wont to do. That this is true, even the vegetables themselves bear witness, which being put into our moist fires are therein dissolved, and pass into a water. But their oil which is in them is separated, and swimmeth at the top, and so may be separated thencefrom, as we have mentioned above concerning the May-worms. After the same manner the essence of the herb may be severed from the spirits of the salts, as we have there declared. The oyls which by this operation are drawn out of the herbs and other vegetables, do obtain great and peculiar virtues, because they are excellently well corrected by the efficacy of the moist fires, and are amended, which correction, and bettering they do not at all attain by their being distilled and expressed.

LXXVI. *The correction of the too vehemently purging subjects by the moist fires, whereby they*

may be safely made use of.

Diagridium or *Scammony*, *Hellebor*, *Cataputia*, *Gambogia* and other vehemently purging subjects may be dispoiled of their venemous faculty, by the aforementioned way, and be rendred more sweet and milder.

LXXVII. *The correction of the too vehemently operative Diureticks, whereby they may be of safe use in the cure of the Stone.*

Dissolve Cantharides, May-worms, Earth-worms, Millipides or Pig-lice, in our con-centrated fires, and follow those ways of operation which we have afore prescribed, and you shall acquire an excellent and safe medicament, having a faculty of healing the Stone of the Bladder and Reins.

LXXVIII. *The amending of narcotick and somniferous subjects by our moist fires, that so they may perform or shew their virtues without hurt or danger.*

Take *Opium*, Henbane seed, Mandrake, or the like subject that provokes to sleep, pour on it the con-centrated spirit of salt, and it will melt [or dissolve] therein; if there be in it any oilyness, as in the Henbane seed is usual, it will separate it self, and swim on the top of the liquor, the which is to be severed from the liquor, and to be warily kept; because it being onely anointed on the Temples will presently cause sleep. The liquor is to be used internally, as we have prescribed in the precedent preparations.

LXXIX. *The amending of venemous subjects, that are together purgative, sudorifick, diuretick, and*

somniferous, by our moist fires; insomuch that they do not onely become safe, but are the effecters of much good in medicine.

Amongst the number of such kind of subjects, are Stavesacre, or the seed of the louse-killing herb, Levant Berries, vomiting Nuts, and many others of such a like faculty, which are to be proceeded withall after the same manner, and by the same operations as the former.

By this or the like way may all venemous, and vehemently operative vegetables and animals be corrected, so as to be safely admitted to internal uses, and to be producers of such effects as are of great moment in Physick; whereas otherwise (though they have in them excellent virtues) they cannot by reason of their vehement operations be taken into the body without danger.

LXXX. *Whether or no poisonous minerals may be corrected as well as the vegetables and animals, by our secret and moist fire of salt, and be turned into wholesome medicaments.*

You are to know, that not onely venemous animals and vegetables but likewise all the minerals that abound with poison may be amended, and their most present or speedily operative poison be converted into most excellent medicines. For example.

LXXXI. *How the venenate and volatile minerals are so to be inverted by our moist fires, that the volatile be rendred fix, and the poison be made a medicine.*

Take of white or red Arsnick one part, pour thereto two or three parts of the con-centrated fire of niter,

the which [niter-spirit] you shall distill thencefrom in a head and body in sand; then take the remaining matter out of the glass, and wash it with common water; which being done, you shall have the Arsnick, Diaphoretick, and such as may with safety be taken into the body; but yet in a small dose, because it doth sometimes provoke vomit, and principally when the nitrous fire is something of the weakest. But to prevent such vomiting, the said fire is to be twice or thrice drawn off from the Arsnick, by an Alembick; that so the poison may the better be slain, and the volatility transmuted into a fixity; and the same Arsnick may be afterwards molten and handled with the other metals without all danger of poison, which was impossible to be done afore. For the Arsnick whose poisonousness is not as yet removed from it, cannot be admitted into the body without great danger. Neither do we here insert the preparation of such medicaments out of Arsnick, and the like venemous minerals, for this cause that they should be introduced into medicine; no, for there are other safer medicaments to be had, our aim herein is onely this, to shew that even the most poisonous, and most fugacious or volatile minerals may be inverted or turned in and out by our moist fire, and dispoiled of their venenosity and rendred fixt.

LXXXII. *The manner of transmuting the fugacious and easily fluxible minerals by the moist fires of salts, so as that being fixed they hardly admit of fusion or melting.*

To exemplifie this, let us consider of Tin or *Zink*, which are reckoned amongst the metals of most easie melting, and are most volatile. For the vulgar know that Tin is molten with a very little fire, and doth thereby vanish in fume, if it be but kept in continual flux. But if it be calcined by continually stirring it

into ashes, it becometh fix, nor doth it admit of reduction to its former body by any violence of fire, but is turned into glass.

So after the same manner do we roast or calcine Tin, *Zink*, and the other flying metals with our moist fires, and burn them into ashes, and they such ones too as do not return to their former body, and thus 'tis done; when we pour on them our fiery liquors, so as that they heat together, or do even by abstraction [or distillation,] again free the said metals from those liquors; for then these metals remain in the bottom like to dead ashes, nor do they suffer themselves to be by any means reduced to their former bodies.

N. B. But whoever he be that knows the using of such matters and powders thereunto, as can reduce such ashes to their former and fusile bodies, such a one will not spend his labour in vain; for he will get a metal of a much more noble and better nature than Tin, whose greatest internal part is gold and silver.

But yet let no body imagine that he can perform this reduction by the help of Borax or Salts; no, in no-wise. For there are metallick matters required to this labour, to cause a fluxing or melting, sundry preparations whereof I have taught to and again in my writings, but not under such a title or name as if this power or efficacy of thus doing were ascribable unto them. For I have barely mentioned their use in other metallick transmutations.

LXXXIII. *How flying mercury is to be so fixed as to admit of heating red hot.*

Coagulate common mercury with common sulphur into a black ashes, and then mix this ashes with the

con-centrated fire of vitriol, or rather with such a fire as is extracted from sulphur it self; so as that there may arise from this mixture a thin mass; of which mass put one or two lots in linnen or cotten rags, and so rowl them up that one fold may come over another, and the mercury may be in the middle. Then tie this ball firmly and strongly with a thread, and let it be environed all about with the fire, that so all those rags may be red hot and changed into Coals.

Take out all this red hot mass, let it cool, separate the burnt linnen rags, and you shall find the mercury turned into a red powder; but yet it hath no ingress into the metals, nor performeth it any thing of much moment in medicine, because it is converted by the burning of our fire into a dead earth. Neither have I here mentioned this coagulation as if any gain were to be received thencefrom; but onely on this account, that the most great virtues and powers of our fires may by the operation thereof be demonstrated.

LXXXIV. *Another experiment easily demonstrating the possibility of rendring mercury constant in the fire, by our secret fires of salts, which thing the known and common fire can never do.*

Melt one part of common and yellow sulphur in a crucible or earthen Pot, and being molten like oil cast thereinto two parts of common mercury, and mix the matter well with a *Spatula*, that the sulphur may assume the mercury, and may pass with it into a black mass. To which mass you must yet add so much sulphur as the weight of the whole mass in the Pot is of. Then all is to be molten together, and to be by well stirring so long mixt untill it get an ashy colour. Then you are to dip in the said mass as it is in flux, pieces of linnen, such as they are wont to use

about fuming their Barrels with a brimstony odour, to preserve them from stinking. Such rags being put on an Iron Crook may be kindled, by which kindling they are burnt up, the sulphur and part of the mercury vanishing into the air, but some part being calcined with the flame of the sulphur and fixt, sticks to the burnt linnen. But what virtues this calcined mercury abounds withall I cannot tell, as having never experimented it, and I have onely inserted here this operation, for this end, that the power of our moist fires may be made apparent. Many more meditations and inquisitions will be thereby laid open, which otherwise would never have been sought after nor found out. For in this labour there operateth a twofold fire, *viz.* the visible flame, and invisible moist fire which the sulphur hideth, and by the burning up of its body, manifesteth, and renders visible and efficacious.

For that heavy acid oil of sulphur, which sticks hidden in all sulphur, performeth most great matters in metalline things; and because the flame or external fire exasperates and forceth on the internal, sharp and moist fire of the sulphur, that acid quality lets upon that subject that is adjoyned to it, and destroyeth the same, and advanceth unto a more fixed state.

But that I may in some sort satisfie the greedy searcher after truth in this thing, it seems to me expedient here to mention the occasion, which (without studying thereafter, *viz.* this coagulation of mercury) did by chance bring me thereunto; and did chiefly shew me an excellent *Arcanum* of bringing all Wines, Vinegars, and other such like drinks easily and speedily to a clarity and transparency. Such a secret it is, as I believe never was known as yet to

any, and therefore worthy to be here set down for the common benefit of mankind.

LXXXV. *An historical discovery of the reduction and restoration of tenacious and corrupt Wine, to its former clarity and goodness.*

I had some Wine in a Vessel that became viscid or ropy and tenacious; for the amending of which, I sent for a Wine cooper, he pours it out (as is the usual custom) into another fresh vessel, and used thereunto all his art, that so he might better it. He passed it oft times through a long Pipe made of white plates, and perforated with many small holes, and many other means he used, even whatever he had knowledge of, but yet all he attempted was in vain, then at last he put into the Wine no small portion of salt, and shook them both together very strongly, but all in vain, insomuch that he left my Wine corrupt [as he found it] and out of all hope of restoring it.

But because there was too much salt thrown into the Wine, yea so much as that it might be perceived even by the tast, the Wine was rendred unfit to be drunk, though it should have [thereby] recovered its former clearness. So there remained nothing else to be done therewithall, save the extracting of its spirit by distillation. Yet nevertheless I had a good mind yet to try whether or no it could possibly be freed from that tenacity: to this end therefore I kindled some sulphurized rags, being sprinkled over with the mineral or oar of lead reduced into powder, and with that fume imbued I my Wine, as is the usual custom when Wines are through corruption degenerated from their good state or condition. I added thereto the oar of lead because that as the sulphur was burning the fume of the lead might penetrate the

Wine and precipitate all the defilements to the bottom. But this experiment did not fadge. Then I took mercury and mixt it with sulphur after the aforeshown manner [in the foregoing Chapter] and dipt some rags therein and kindled them, hoping that the mercury being transmuted into fume would have ingress into the Wine. But yet it appeared quite contrary in the use, the sulphur indeed was consumed by burning, but the mercury would emit no fume, but was contrarily turned into a red powder, and stuck on to the burnt rags. After these burnings, (*viz.* of this mercurialized sulphur) often reiterated, the Wine did not smell of the Brimstone, as it's usual to do, but of Musk or Ambergrease, and recovered its former clarity; but yet not fit to be drunk because of the overmuch quantity of the salt thrown thereinto.

Thus it happened unto me, the which thing others may consider of with a more accurate meditation, and may haply (from this history apprehend such things, as may in other matters be very profitable. For it is not in vain that I mention these things in this place. Enough is said to the wise. 'Tis sufficient that I have showed the way, if any one refuse to go in the same let him blame himself.

LXXXVI. *How our moist fires of Salt are able after a sort to fix the yellow and common sulphur, so that it may be used with profit both in Medicine and Alchymy.*

Take one part of yellow sulphur beaten into powder, and four or five times so much in weight of the concentrated fire of salt peter, which spirit pour upon the said powder in a glass cucurbit, and abstract it thencefrom several times by an Alembick; this done,

the sulphur in the cucurbit will get a red colour and become pellucid or transparent.

If it resolves in the air into a fat oil, the operation is well handled; if not the labour is to be repeated either with the self same fire or with more new, which is the better way. For the said fires are to be so often drawn off thencefrom untill it flow [or resolve] into a fat oil: An oil I say of sulphur which is endued with great virtues, not onely in Alchymy and Medicine, but may likewise be used in other arts with a great deal of profit. But especially it is an egregious Balsom, resisting all the sicknesses of the Lungs, and other putrifying corruptions, as shall be apparently evidenced in the following Centuries, more largely treating about these things.

LXXXVII. *A way of turning Antimony into a snow-white medicament, by our moist fires of salts, and which is of safe and profitable use against the Plague, all Fevers, and other diseases.*

When the *Regulus* of Antimony made *per se* without iron, and beaten into a powder is perfused or throughly moistened with the con-centrated fire of salt peter, and is for a while kept in warm sand; the moist fire burns the *Regulus* of the Antimony into a white powder. After that the whole shall be of a white colour, pour thereto common water, and it will imbibe or draw to it the fire of the niter, which will again be fitting for other labours, and perform the office of spirit of niter.

The white powder being by many washings rendred sweet, and then dried, performs the office of an excellent diaphoretick medicament and may with safety be used; it strongly resists the Plague, all Fevers and other diseases, that are to be expelled by

sweat.

LXXXVIII. *By what means black and crude Antimony is to be reduced by the nitrous fire into a white powder, and the combustible and yellow sulphur separated therefrom, that it may serve as a* Panacæa *for the resisting of all diseases, and may operate by the four Emunctories, Vomit, Stool, Sweat, and Urine.*

Antimony is by so much the better and nobler, by how much the longer and fairer Rays or Stria's it appears to be of, and therefore such is of greater efficacy in medicine than all other sorts. To this therefore being powdered, pour so much of the nitrous fire as may serve to dissolve it; the which fire will presently even in the cold, begin the work of its dissolving. When that is done, put the glass in warm sand that all the Antimony may be dissolved, and its yellow sulphur may swim at top of the solution like a yellow powder. The solution being cold, strain it thorough a pure linnen cloath, and the sulphur will stay behind in the cloath, and hath its peculiar use in Medicine and Alchymy. But to the solution pour common water, thereby to quench and weaken the nitrous fire, so that the Antimony may fall down to the bottom, in the form of a tender and snow-white powder; the which being well washed and dried, may be made use of as a *Panacæa* to drive away many diseases: For it operateth with a singular efficacy by all the Emunctories, but yet very safely, unless any one doth too foolishly and unskilfully abuse the administration; It is also endued with all those virtues that I have ascribed to my red *Panacæa*.

LXXXIX. *By what means the con-centred fire of Kitchin salt drives over Antimony in a retort like*

Butter, and affordeth a matter of profitable use in Medicine and Alchymy.

Pour upon the *Regulus* of Antimony beaten into a powder, the heavy con-centrated oil of common salt, the which being again drawn off thencefrom in a retort by distillation, brings over with it as much of the *Regulus* of the Antimony as it can, and ascendeth like a thick Butter. It is a mighty fire, and very fit for the ripening of some immature metals; and withall is most profitable in Surgery, and lays a good Basis and foundation for the curing of incurable and cancerous Ulcers. If you pour water upon this oil, the Antimony precipitateth out of it, in the form of a white powder; and is to be afterwards well washed and dried; so that being reduced into that white powder, it becomes a good medicament to be used in all those diseases, wherein the aforesaid medicaments are appliable; but with this caution, that it be given but in a very small dose, because it is of a more powerfull operation than the aforegoing medicaments prepared by the help of the nitrous fire are of, and that for this reason, because the oil of common salt makes things fugacious or flying, but the nitrous fires renders them more constant in the fire.

XC. *The way of turning mercury into a red, and strongly purging medicament by the operation of the nitrous fire.*

Abstract two or three parts of our nitrous fire, from one part of purged mercury, by distillation in a glass cucurbit; and it will make the mercury far more fixt than if *Aqua Fortis* were many times drawn off therefrom by distillation. This red mercury is to be freed from its saltiness with common water, and so

becomes a strong purge, and is to be used in a small dose of one, two, three, or at the most four grains, and effecteth the cure of *Morbus Gallicus*, and other such like loathsome diseases.

After the same manner there may be easily prepared, not onely sundry and excellent medicaments, by the operation of our moist fires, but there may be likewise done things of great moment in Alchymy and other arts; concerning which time will not permit me at this present to make a more ample narration of, but I will remit it to the next following Centuries.

Now forasmuch as I call in this Treatise the concentrated spirits of salt, moist fires, and yet as to their outward shape they represent no shew of fire at all; I deem it necessary to shew by a more firm demonstration, that they abound not onely with fiery virtues, but also are (after their inside is turned outwards, and their outside inwards) true, visible, palpable, and sensible fires, but especially the nitrous fire, which best of all confirms this our opinion and saying, it being prepared by the Chymick Art and operation out of a fiery subject.

XCI. *The way of converting or turning the internal and yellow colour of our moist and white nitrous fire from the inmost parts, outward, and making it visible.*

That there is hidden a yellowness and redness in niter, is not beyond the reach of any ones capacity, but it is very easily likely, and credible. For seeing that salt peter is a solar child, it must necessarily answer to [or resemble] its father the Sun in colour, form, virtue and efficacy, if it would purchase belief with any one as to its original and nativity. But salt peter

shines with a white colour, but the Sun is clad with a yellow garment and shines like the fire; insomuch that there is no correspondency or likeness of colours, though otherwise there is found the greatest similitude in burning, and in ripening all things. This onely being the difference between salt peter and the Sun, the one, *viz.* the peter doth particularly onely augment, ripen and advance all things; but the Sun doth universally bestow on all things, life, increase or growth, and nutriment, but yet the salt his companion is an helping assistant as shall be evidently proved in the end of this book.

I do verily believe, that if it were an easily accomplishable thing by us, *viz.* to extravert the internal and innate redness in salt peter outwards, and to separate the same from its unclean and gross body, and knew we how to render it fix and constant, we should perform things of most great moment, in an universal way.

But yet for the removing of this doubt, I will shew that salt peter is the son of *Sol*, though (as to its outward Physiognomy) it resembles not its Father. I do therefore say, that its Father is the yellow Sun, from him it is generated, but yet by the help of the white Moon, she is the Mother, and bestows on it the white colour. But I say, that the paternal bloud and fiery virtues it hides in its inmost bowels. So wisely is Salt Peter signed by its Parents, *viz.* by the Sun its Father, and the Moon its Mother. The Father bestows on this, his Son a fiery heart; the Mother a white and cold body; from hence 'tis that it is clad with an Hermaphroditical nature, being Male and Female together, hot and cold, red and white, vivifying and killing.

XCII. *Of the admirable nature of Magnetism, attracting to it self its like.*

According to my simple and small judgment, the red colour of salt peter is not (by the operation of any other thing) to be separated from its white body, better and more commodiously than by the affinity and likeness of some certain magnet that will touch it.

For example: Let us consider a little of common gold and common quick-silver, they are so linked with a tye of mutual love, and internal likeness to each other; that the one draws the other unto it self.

For if in dealing with mercury any portion thereof should happen to fall on the ground, and dashing it self into a thousand Atoms, it cannot be by any kind of way better gotten together again, than by the help of such a magnet, as will attract to it self the dispersed and dilated Atoms; such a magnet metals are, and especially gold, as being conjoyned to it in the nearest affinity; therefore I sweep together this so widely dispersed mercury, together with the earth and other defilements from which the said mercury is scarcely distinguishable as being all over covered therewithall: and to these defilements do I put a piece of copper, silver or gold, which being well shaken to and agen amongst these filthes, draws to it self the widely dispersed and small Atoms of the mercury, and so recovers it by extracting it out of all that rubbish.

Now when the metal hath attracted mercury enough, and can attract no more, the mercury is to be wiped off from the metal with a linnen cloath; which being again well shook amongst the trash as you did afore, draws to it self the other Atoms: these

labours are to be so often repeated, till it be all extracted, and so renders it thee the same without any loss.

Just so and after the self same manner may the inmost soul, and which is largely dispersed throughout the whole body of the salt peter, be extracted thencefrom; were onely such a magnet but known unto us, as had a great affinity with the soul of the niter.

I will yet set down another, and a more evident similitude, that so the business may become the more clear and manifest and be the better understood.

XCIII. *A clear and evident demonstration, whereby is shown that even the most hidden things may be manifested and rendred visible by their magnets.*

Let the admirable nature and property of the common magnet be well considered; nature having endowed it with two plainly contrary virtues, one of attraction, the other of expulsion. For on one of its sides it draws iron to it self, and on the other of its sides it drives it off; and thus it does, not onely in its great pieces, but also when 'tis broken into very small bits. For always on one side it draws to it self the iron, and on the other side drives it from it self, by this operation respecting both poles, *viz.* the Northern and the Southern.

But to return to my purpose: I will demonstrate by evident examples and operation, that the inmost and most hidden nature and properties of things, are wont to be most evidently manifested and obtained, by attracting, and repelling magnets. For all the things that are, have their enemies and their friends,

as shall be proved in the following operations.

XCIV. *An operation demonstrating or affirming, that the internal and hidden natures and properties of things may be manifested and obtained by attractive or repulsive magnets.*

Dissolve some lots of lead, and such as is wholly void of silver, in *Aq. Fortis*, and precipitate the lead by pouring thereunto some salt water, this [precipitated lead] wash with fair water and dry it. Take some three or four ounces of this *Calx* of lead, and thereto admix a fifth part of pure gold, being first reduced into most pure and most subtile Atoms, on such wise as hath been taught in other places of my writings; but if you have not at hand such a *Calx*, use another *Calx* of gold prepared any kind of way, but yet the first *Calx* is the fittest for this operation. Melt both the *Calx*'s, *viz.* the leaden and golden one in a crucible, that the lead may become a fusile stone; but the gold *Calx* will (by this operation) be much heavier, and be white, this whiteness is nothing else save pure and good silver, drawn out of *Saturn* by *Sol* sympathetically, and made visible, which (afore) lay hidden in the lead in a spiritual and invisible manner.

But some may here demand; forasmuch as there is so much silver hidden in all lead, whence comes it that none are found that get it out from thence? I answer, that there are indeed a many that would get out great masses of silver out of lead, did they but understand the art, and could so bring it to effect. But seeing they are ignorant of the natures of metals and their properties, and know not how to do any thing, they cannot become masters of their wishes. Now in this extraction, there is a two-fold cause

presents it self, *viz.* Sympathy, and Antipathy. The gold by reason of the kin and amity it hath with the lead, draws thencefrom unto it self the spiritual silver; and because of an inbred hatred it has to salt, it drives away the same from it self. The gold therefore (in extracting the spiritual silver out of the lead) hath an assistant, aiding it by a contrary operation, and so bringing to pass, that there is so much the more silver extracted, because the salt being added to the lead, doth by reason of that inbred enmity and difference 'twixt it and silver drive this, [*viz.* the silver] away from it as its enemy.

And although that out of such lead prepared with salt may silver be always molten, yea without adding any gold thereunto, meerly because of the inimicitiousness that is between silver and salt, whereby is caused that the silver is thrust out of the lead by the same as by its enemy; yet so much silver is not gotten by that way, no not by the half, as is drawn out by the addition of gold.

For when the gold attracts, and the salt expels, there are made two actions together, the one by Sympathy, the other by Antipathy, both aiming at this mark, *viz.* to extract the hidden silver and gold out of the lead.

Let there be evaporated in a cupel two small centenaries or hundreds weight, each of like weight; and to one of the centenaries add some pounds (of the proportionable small weight as the centenaries are) of pure gold, and there will come from that centenary more silver by the help of the gold, than from the other, whereto was added no gold: But the gain by this operation will not be much, or haply none at all; but this is onely to shew, that it is verily possible, for gold being put upon the cupel with lead,

to get some silver thereout of, and to be more in weight; which effect is produced onely by a sympathetical faculty. Be now if salt doth also lend to gold its assistance, then is there a twofold operation of a double operator; whilst in extracting of the silver out of the lead, the gold is occupied in attracting, and the salt in expulsion.

These things were of necessity to be laid open by me, forasmuch as they teach by what means the inmost and most pure parts are to be separated from the more gross; so that every one may know the natures and properties of things themselves, *viz.* with what love they imbrace each other, or what hatred there is betwixt them.

By this experiment then, may any wise and understanding man easily learn and believe, that even out of salt peter or [any] other white body, the red soul may be extracted. Whosoever therefore shall know how to get these helpers, *viz.* Sympathy and Antipathy for his purpose, shall never labour in vain, but shall at all times reap fruit by his labours.

And as we have shewn that out of any lead, by the help of gold, a good part of silver may be extracted; so likewise may the same be clearly proved to be done with the other metals, and which may also be effected without the help of gold. Yet nevertheless the more fixt metal doth more readily and willingly atract the more volatile and purer part of the other impurer metals, than an unclean metal doth, and even much more readily yet, when there is afore adjoyned to that metal from which any thing is to be extracted, an enemy of that thing which you labour to extract.

Upon this account therefore was I willing to insert an experiment, that so none might account of the thing mentioned as of small moment, but rather that he accurately ponder thereupon in his mind, that so he may thereby arrive to things of great moment by a well examining of the same.

Now as it hath been clearly and evidently taught that fixt silver may be gotten out of any lead, as well by Sympathy as by Antipathy, even so may it easily be proved, that the spiritual gold may be extracted out of other metals, partly by Antipathy, and partly by Sympathy, but much easier by Antipathy and Sympathy joyntly together, so that one matter may draw unto its self the object it loves, and the other may drive from it what it hates; as we have proved in lead. If then this may be done in metals, why may it not be likewise done in other subjects.

We will therefore proceed on and see, whether or no it can be so brought to pass, that the hidden redness may be drawn out of salt peter by Sympathy and Antipathy.

Having therefore understood by the things already

spoken, that like draws to it self its like, and is repelled from its unlike, there remains nothing else for us to do but to know what that like is, by which salt peter suffers it self to be extracted.

When we advisedly consider the rise or birth of salt peter, it is not to us unknown that it draws its originality from the excrements of animals, but especially from the dung of horned Beasts, as Cows and sheep. And forasmuch as Sheep and Cows do feed onely on Herbs and Grass that grow in the Fields, and that those vegetables do proceed from the terrestrial salt by the help of the solar beams, it is more clearly evident than the Noon-day light, that the hot Sun is the Father of salt peter and the cold night the Mother, the earth the Nurse, and Salt the Food, nutriment and encrease of the same; the which is to be understood as in reference to the *Macrocosm* or great World. But the vegetables, or all shrubs, herbs, and all grass which arise out of the earth in the *Macrocosm*, cannot be more aptly compared with ought, than with the Hairs and Wool of Men and Beasts, which are born out of the earth of the *Microcosm* or out of the animal body, like as the shrubs and herbs, and grass do spring forth and grow out of the *Macrocosmical* Earth. Upon this score, the hairs, hoofs, or claws, and horns of Beasts; likewise the feathers and claws of Birds, and also the teeth and scales of Fishes, do altogether square as to their similitude with salt peter; they being such things as whereout of, together with other the superfluous excrements of nature, true and good salt peter may be made with ease.

And like as to the procreation of vegetables in the *Microcosm*, and for their increase or growth, there is requisite fat and salt earth, the warm splendor of the

sun, and the fruitfull Rain, whereby all kinds of fruits are born, and ripened; but contrarily by the penury or want of salt (it being the onely nutriment,) and of the warm Sun beams, and of the Rain which is the promoter of all fertility, every thing that is vegetable must needs perish and die; even so is it in the body of Man: For as long as the heart of Man is in a prosperous healthfulness, and that the central fire, or vital spirit, and radical moisture be not defective, all things are well and in good equipage, and the whole body takes increase or growth, and the hairs grow plentifully: But on the contrary, when meat and drink fail, the whole body suffers loss, consumes and withers away and the hairs fall off.

But to comprise all in brief, I say, that all growths and augmentations as well in the *Macrocosm* as in the *Microcosm*, must of necessity be at a stand and lessen as soon as the warm solar beams, together with the nutriment it self ceaseth and is deficient. So then it is a truth, that in Man as being a *Microcosm* or little World, and in the other animals, the hairs may be compared with the Trees, Shrubs, Herbs, and Grass of the great World, because of the great likeness that is between them.

And therefore the hairs of animals and hoofs, claws, feathers and scales of them are very like to salt peter, insomuch that one part doth after a sympathetical manner extract from the other, the most great virtues and inmost soul, and so one doth manifest the other.

For example, when the skin, hairs, claws, hoofs, or nails of a man or any other animal, as likewise the feathers of Birds are smeared with the spirit of niter, or anointed therewithall, they presently become as yellow as gold, and do as t'were put on a golden hue.

It may now be demanded, from whence ariseth that colour? comes it from the hairs themselves, or from the niter spirit? If that golden colour did arise from the hairs themselves, then it would of necessity be, that it should also discover it self, when the hairs are moistened with other sharp and strong waters; but thus 'twill never do, but onely when they are smeared with the spirit of niter, or else with *Aq. Fortis*, which containeth the niter spirit. From these things therefore it is evident, that the superfluities of the *Microcosm* have a most notable affinity with the superfluities of the *Macrocosm*, *viz.* herbs, and grass. Hence comes it to pass, that one part draws or sucks from the other part its best virtues and power, and renders them visible, which afore lay hidden invisibly and impalpably in their gross bodies.

XCV. *The manner of extracting out of niter its gold-like soul.*

If we would go the nearest way to work with niter to extract its soul, then the gross niter is first to be mundified by distillation, then afterwards out of this purged body is the most pure part to be extracted by a convenient magnet, and the gross fœces to be removed; and this most pure soul to be brought by concentration and fixation to the utmost degree of perfection and dignity.

And albeit I could here set down in more clear expressions, the manner of extracting it, yet I am not so minded to do because of the unworthy. Let this manuduction suffice, whereby is shown what means it is to be done by, *viz.* by some magnet attracting to it self its like by a magnetick operation. I can at all times exhibit such a yellow gold like soul of niter, and use it in the sicknesses of my neighbour. But,

enough as touching these matters, we shall be more large concerning them, in the following Centuries.

XCVI. *How the moist and cold fire of niter is to be so ordered as to yield its visible flame.*

Put some ounces of our con-centrated and moist fire of niter in a glass, and pour thereupon drop by drop a sharp *Lixivium* made of Wood ashes, or rather of fixed niter, and keep pouring on so long, till all the noise, fuming, and ebullition cease, and that the moist fire it self be wholly allayed and slain. This done, all the corroding faculty is taken away from that fire, which said fire doth by this operation return to its former nature, and is changed into such a salt peter as it was afore its being converted into a moist fire. Out of this salt peter, being now made purer and better by so many conversions and operations, may a new moist fire be extracted by distillation and con-centration, which is far better and much stronger than the former.

And now if this second moist fire be again extinguished with a *Lixivium* of fixt niter, and be again turned into salt peter, and this peter be by a new distillation and con-centration turned into a moist fire, this said fire will be endued with far greater virtues: For in every mortification and vivification it becomes one degree stronger, nobler, and more efficacious; and so is the salt peter it self too by those conversions and reductions exalted several degrees, and is at length brought to that pass, that it can do more wonderfull things than the common is wont to do; for one pound of such a salt peter being exalted to the utmost degree of subtilty is far more efficacious than many pounds of common salt peter, and stronger, and much excels it in virtue.

But it is not expedient that every one should know, what may be effected with such a most subtile and most pure salt peter.

The ancient Philosophers hid the preparation and use of common salt peter; and why should not we also hide such a salt peter exalted to the utmost degree of subtilty, wherewith the common peter is not at all comparable, especially in all such labours whereunto the common sort is wont to be applied, this operates much readiler, and far better and more effectually.

But that the truth may be clearer than the noonday, I will add one operation of a metallick transmutation, by which it shall be clearly evidenced unto every one what such a most subtile salt peter is able to effect.

XCVII. *An operation shewing the manner how by the help of salt peter promoted to the highest degree of subtilty, the superfluous combustible sulphur of the imperfect metals may be kindled and burnt up; even as common fire burns up wood, insomuch as nothing will be left remaining save a little fixt salt and ashes; so likewise in this burning up of the impure metals by our most pure salt peter, there remains also nothing save that fixt gold and silver which lay spiritually hidden in the metal, and is [now] left by the combustible Scoria's.*

Every one knows that out of the common Salt Peter and Brimstone, may Gunpowder be made; but yet short in goodness, of that which is made of purified salt peter. By how much the purer and subtiler the salt peter is, so much the better and stronger powder doth it make. The same may be understood as

touching the other uses of salt peter.

Further, every one knows that the common salt peter reduceth the common metals into a Scoria by burning them, and washeth gold and silver, and leaves them pure, concerning which fiery washing I have hitherto mentioned several things. But that the common salt peter doth perform this washing better than the pure, and this pure better and more efficaciously than the purest, is no such matter in the least, which thing experience will most manifestly open to him who will try the same. Verily a small fire will not do those things which a greater will do, nor will this greater effect such things as the greatest will, and this is so evident and manifest that there is none dares deny it.

Take one part of the *Regulus* of Antimony and four parts of pure Tin; melt them in a crucible and pour them out, and let them cool; this mass makes all iron and steel fusile, therefore when you would melt iron or steel, fill a crucible with either of the metals, set it in a Wind Furnace, and leave it so long in the Coles till all the matter wax highly red hot. Then take off the cover and put into the crucible, half as much of the said mixt mass of *Regulus* of Antimony and Tin, as the iron or steel put in the crucible weighed, then put on the cover, and cover it over with the Coles, and urge the fire as strongly as ever possibly you can, that so the mass you put in, may cause the iron or steel to melt. When ’tis all well molten, pour it presently forth, least the Tin flying away in fume, leave the molten iron, and so it returned to its former hardness and not suffer it self to be fused.

This matter consisting of the *Regulus* of Antimony, Tin, and Iron, or Steel, is so hard, that you may strike fire thereout of with a flint.

Now then if you would experiment the abovesaid combustion or burning up, take a good strong crucible made of potters earth, and fill it with salt peter, set it on live Coals so that the salt peter may melt, then having cast your tin and iron in the form of small rods, heat one end of the rods so as not to melt, hold the other end in a pair of Tongs, and put it into the molten salt peter, that the iron together with the tin and *Regulus* of Antimony may be burnt up as if it were wood, and vanish away with the flame into a fume. For almost all tin and iron are a meer sulphur, and being consumed by the flame, leave nothing else in the crucible save *Scoria's*, which being washed with water, and boiled on a cupel or test with lead and blown off, do leave behind, the true gold and silver hidden in both metals.

For when by the flame of so pure a salt peter, the impure sulphur of the iron and tin is burnt up, it must necessarily be that what good soever was in the metals do remain behind.

I do not therefore here set down this operation, as if I would thereby promise any one golden mountains. No such matter. For I onely manifest these, and such like labours meerly for this end, that every one may know, that salt peter being brought to a requisite purity, is wont to burn up imperfect metals as one burns up wood; and it may be easily gathered thencefrom, that such a pure salt peter doth as to its virtues much exceed the common peter.

As for such like labours of burning up the imperfect metals by salt peter purified in a due manner, and of getting pure gold and silver with profit, they shall be taught in the following Century (God willing.)

For even as this first Century doth for the most

part treat of fire and salt; so the chiefest part of the following Century shall treat of the wonderfull and great efficacy of purified salt peter in destroying, and reducing metals, and that with great bettering of them, and with no small profit. And albeit I was desirous of inserting in this first Century, such like profitable betterings of the metals, yet it could not well be done; principally because that there are many other things concerning the profitable use of the con-centrated spirits of salt, that I must necessarily pass over here, because the number of this Century is already up, and therefore must I refer them to the following Centuries.

And forasmuch as there is frequent mention made in this Century, of glasses and crucibles, which none can be without in the preparing and use of these moist fires, because of the many hazards and losses wherewithal common instruments are accompanied, for they often break, or else easily let out or spill the boiling matters; it is altogether requisite that I should here have manifested this excellent invention of mine, which preventeth all such discommodities; and which I hinted at in the second part of my *Miraculum Mundi*.

But whereas I have bestowed both those inventions there on the poor, of meer gift, it would be an unjust thing to take away from them what is theirs; nay rather they should have by good right more bestowed on them. So then being not able to proceed any farther as to this case, this thing onely remains, *viz.* an affirmation that neither Medicine nor Alchymy can want or be without such excellent Inventions. But yet if any one desires to have them, he may write to those two men, to whom I have given them, that they may trade for the poor;

whatsoever any one that is desirous of knowing those secrets shall bargain with them for, he will not be repulsed but obtain his desire, and purchase from them the secret; the which process I will nevertheless describe, omitting the naming of the matters.

XCVIII. *The way of putting glasses in distillation and digestion, and so conserving them, that the boiling matter be not spilt.*

Take

with this matter fence your glass, that the matters you put into them run not out, or be spilt, and you shall not lose them.

XCIX. *The manner of preparing such crucibles as will hold metals in flux a long time, and which can neither be broken nor melted.*

R.

mix these matters and moisten them with common water, that they may be converted into a mass, of which you shall (by a crucible mold) frame small and great crucibles, knocking them into your mold with an heavy mallet, according to the manner I described in the fifth part of my Furnaces. Then take them forth of the mold and dry them in the air, and when they are dry use them; for they need not any burning in the Potters Furnace. They will (being rightly handled) stand a long time in the coals, and will not chap, neither will they melt with the most vehement fire.

C. *An infallible demonstration, that in salt and fire all things lie hidden; or, that by the help of the*

Sun and Salt all things are generated, arise, grow, and encrease.

Forasmuch as I caused to be stamped at the beginning of this small work, a circle with a square in its inside, and with these annexed words, *In the Sun, and in Salt are all things*; (the truth of which figure and inscription is sufficiently enough evidenced by the so many operations described in this Century;) it seemed worth while unto me, to make an assertion here in the end of this Treatise by a true and evident demonstration, that all things are procreated, conserved, and encreased by the Sun and Salt, as being the principal and most noble creatures of God; but with this provizo, that there be present the seeds of those things that require multiplication.

For though the Sun and Salt were yet far excellenter and nobler subjects than they now be, yet notwithstanding could they not produce or generate so much as the smallest herb or meanest worm (to say nothing of a Man) without seed. If we have but seed, then it is permitted us by God, to propagate the same by the Sun and Salt. The begetting of seeds, God hath reserved to himself alone. The seed therefore is for us sufficient, which if we have, we are able to propagate and encrease it even to infinity, by the efficacy of the Sun and Salt, (that universal nutriment of all things.)

The universal medicament and nutriment that the Countrey men use about conserving their Vineyards, Grounds, and Pastures, is the Dung of Cattle and Sheep; from the which Dung being laid to the roots of the Vines and Trees, and thrown into the Fields and Pastures, the Vegetables do attract their necessary nutriment, do grow and bring forth fruits needfull for the support and nourishment of Men and

Beasts.

But forasmuch as this nutriment which all the Vegetables do extract out of the Dung of the Beasts is nothing else but a urinous Salt, and that we know how to prepare out of the common Salt, such a urinous Salt which may be used about dunging and fatning the Earth instead of Dung, therefore verily we may be without that said Dung, being but furnished with such a Salt; the which being Alkalizated by the fire doth extend it self much wider, or goes farther, and dures much longer in the Earth, nourishing and dunging it, than the Beasts Dung doth.

Besides it gives to all Fruits and Corn, a far sweeter savour, and smell, than Dung it self doth, the truth of which will easily appear to him that will make tryal of the same. Nay more, and what is of far greater moment; there may (by the help of such Salts) be communicated to Fruits, especially to those that grow on Trees, and to Grapes, a most fragrant odour; if instead of Dung, such Salts be used to the Fields and Gardens, and some spices or other things of a fragrant smell be mixed with those Salts, and put to the roots of the Vegetables. An example will illustrate it more clearly.

Plow up some part of some barren Ground, such as is so for want of Dung; or, even some meer sandy Ground, and throw upon it of the said salt as much as is sufficient, and by plowing mix it with the Earth it self, and sow therein any kind of grain you please, and it will spring up out of the salted Earth or Sand, and be encreased, and recompence the pains taken about it, with an hundred fold encrease of the seed, even just as if you had dunged it, nay better than with the common Dunging.

And now I pray, whence doth that faculty of growing, encreasing, and multiplying arise, save from Salt alone, which you sowed your barren Field withall? For the seed cannot purchase to it self nutriment, and aliment, growth and encrease from the barren Sand and Rain-water onely. And this you may try the truth of very easily, if you fill two wooden Chests or Boxes with common Sand, and put to the Sand in one of them one, two, or three pounds of that inverted Salt, (according to the bigness or smallness of your box) and in the other box let there be onely Sand. If now you sow divers seeds in each of the Sands, and set them in the air, moistening them with Rain-water, those seeds will indeed grow out of both the Sand-boxes and get increase, but yet that which grows where it has been sprinkled with Salt is far fuller and perfecter, insomuch that it will hold on its growth till it comes to its utmost ripeness, whenas the other seeds in the other Sand-box will by little and little perish and dye.

It evidently appears from hence that the faculty of growing and increasing, in all things proceedeth from Salt onely. If so be therefore, that Pease, Beans, Oats, Barly, Rye, Wheat, Wine, and all kinds of Fruits, do grow, and are increased by the benefit of Salt, it necessarily follows, that Salt is the subject and universal nutriment.

But that it may be understood how the common Salt (which otherwise is wont to corrupt or extinguish all the faculty of growth in those things it is mixed withall) is to be inverted or turned in and out, that its hurtfull corroding property being put off it may put on the nature of Alkalies or urinous Salts, I do here covertly set down the manner of the operation, so that it may remain hidden to mine

enemies and be communicated onely to my friends.

Take common Salt, *&c.* [See the Preparation in Append. 5. p. *Prosp. Germ.*]

Let them be well heated red hot together at the fire, this done, the salt will be dispoiled of its Acrimony and get an urinous property, and being used in a due quantity instead of Dung, to barren Grounds, causeth that the seeds sown therein produce much fruit. But this kind of dunging requireth frequenter Rains than that which is done with Dung; and therefore it may be better and more commodious in moorish places than Beasts Dung, if it may be done, which conjoyns the said salt, and produceth the most wished effects

But especially the said salt is far better for Vines and Fruit Trees than Dung is: for it gives to Grapes, Apples, Pears and such like Tree-Fruits, a far better savour than Dung is wont to afford: Besides, this benefit accrues to Vines thereby, that being sprinkled with that Salt, they have oft times nutriment enough for twenty years, and do every year bring forth Fruit most plentifully: whereas the nutriment of dunging will scarce suffice for five or six years.

Further, That Salt may be far easier, and with much less costs carried and transported into the high Mountains than Dung can; for a far greater quantity of Dung is required than of the said Salt, which said Salt diffuseth it self far larger, or goes much farther than the Dung, and dures longer.

I did this very spring-time last past, put such an inverted salt to some half dead Vines, which being planted in a lean sandy ground could scarce grow up a fingers heighth, and they presently began to flourish, and grew up so fast that the growth was day

by day perceptible. When therefore on a certain day I was shewing some Friends of mine the melioration of metals, in my Laboratory, to be effected by the help of common salt, as they were wondring at the thing, I shewed them those Vines afore my Laboratory, that sprang up from the half dead stocks, and they measuring some of the branches of the Vines, found that in two or three months they were grown some 6, 7, 10, and 11 foot long, and the stocks or stalks whence they grew were two or three times thicker than at first; which great change or transmutation in the Vines, proceeding from the salt, would be more admirable and profitable than that of metals, if we did not look upon that transmutation of gold with such covetous eyes. And forasmuch as this transmutation spoken of, was observed in the month of *July*, and that there are almost yet three months for Vines to encrease and grow; any one may easily conjecture what an encrease the wood [or branches] of the Vines would have in the space of a whole Summer.

But let this suffice concerning the inversion of the common salt, being a most profitable promoter of the growing faculty in all things; the which things I was necessitated to declare here in the end of this small work, that so I might demonstrate those things which I asserted at the beginning of the same, *viz.* that in salt lie all things hidden, and by the seeds of things and the help of the Sun are rendred visible, palpable and essential.

An Admonition to the friendly Reader, or a Proposition not prescribing or tying to any body, whereby is shewn how much benefit the Countrey may in general obtain by my not chargeable extraction of Gold and Silver out of the fugacious

or flying Minerals.

That my inventions may be in many places profitable for the whole Countrey, I judged it worth while, briefly to declare my meditations or conceptions thereabouts; and to make a declaration of the way or manner which I judge it may most exceeding profitably be done by.

First of all, I suppose it is sufficiently well known that Princes and Noblemen are occupied or troubled with otherguess burdens and business than to employ or busie themselves with the care and enquiry after the metalline mine-pits, that are here and there in the Countries subject unto them. And if they should commit the care of these things to their servants, 'tis likely that they would rather pass their time in feastings or merry meetings, than in a painfull search of Mines and metallick Veins in the woods and mountains. And as for the subjects themselves, seeing they are altogether rude and ignorant of such arts, by what means, and with what success they can undertake such kind of Labours, any one may easily guess. These are the Causes why things of such great moment are let slip without any profit at all, and are plainly neglected. But in my judgment, though it be but slender, any Prince that hath many Subjects under his obedience, may every year gather store of gold and silver, and that without costs, if he would but onely cause a small Laboratory to be erected, wherein the poor Mines may be extracted with due waters; and leave given to such of his subjects as breath after the knowledge of such Arts, to frequent such a Laboratory, and there to learn such Arts, with this *Proviso*, that every one should bring the gold, silver and copper boiled or gotten out of the poor minerals by the help of the said extraction, into the

Mony-shop or Coining-house, at such a rate as they are every where esteemed or valued at, and not transport it out of the Countrey. Now by this means, not only the chief Magistrate would without any cost and labour get no small profit by the mony, but likewise every body would to their utmost, labour in the inquisition after such poor Mines, that he might get Gold and Silver, and other Metals, out of those poor metallick Veins, and get gain for him and his. But now if the Prince or Magistrate will not permit his Subjects the exercise of such a work, but keep all to himself, any one may easily conjecture, that not so much as a man will set about searching after such Mines, but will rather hide them, especially if the Magistrate (as is wont to be sometimes done) would constrain his Subjects to such kind of Labours.

This (according to my simple opinion, no ways prescribing to any what to doe) would be the readiest way, without hurting of any man (nay rather it would help and assist many a man) of furnishing our Country with Gold and Silver Coin, which Foreigners have made it bare of. But this will not be by any way, unless the Magistrates themselves do make a beginning, as to the institution of such a work, by this means inviting and stirring up their Subjects to undertake such like Labours, which will bring great Treasures even to the whole Country. By this means may rich Mints be set up in very many places, instead of those which at this time afford Mony or Coin so sparingly, and no small portion of Copper too, mixed with it.

These few things was I willing to advise for the sake of the good of the whole Country; only laying down my simple opinion without prescribing a rule to any, hoping, that no body of what rank or

condition soever they be, will take it otherwise than well.

Secondly, Every Prince and great man would mightily promote the common welfare of his poor, if he would but take the care of shewing the way of so inverting common Salt by one hours heating it red hot, and bringing it to that pass, that it may be made use of instead of Cattles dung, for the fatning and bettering of barren Vineyards, unfruitfull Gardens, and other Fields that are backward or slow in bearing Fruits: for verily, even from this very Art would redound much profit to some Countries. For, many Vineyards here and there, and many Grounds do want due tillage because of the scarcity of Dung, whereas otherwise they would prove very profitable both to the Subjects and Magistrates, if they could be fatned and made fertile by this kind of way.

Besides too, all Wines would be had in much more plenty, and be of a far sweeter and pleasanter taste, by such a medium, than if the Vineyards and Fields were dunged with Beasts dung. But as touching this thing, see more in the continuation of my *Miraculum Mundi*.

The end of the First Century.

The Second Century
OF
GLAUBER'S
Wealthy Store-house of Treasures.

Which doth Illustrate his hitherto published Writings, with a more evident Explanation, and doth more clearly demonstrate the Truth hidden in them.

The First *Arcanum* or Secret of the Second Century,

SHEWETH,

By what means such Metals as are imperfect, wild, and in a manner unapt for use or sale, may be ripened or bettered by Common Salt and Fire, so as

to yield forth Gold and Silver with benefit and advantage.

I have in the foregoing first Century, as also in the Appendix to the fifth part of the prosperity of *Germany*, described the incineration or reduction into ashes, which is to be done with Coals in a peculiar Furnace, fit for torrefaction or calcining.

Though this be a laborious way and tedious, yet is it not without its benefit, provided that a great quantity (as I have already oft times said) of the not vendible minerals and metals be thereto used. But that such an incineration may be done after a more easie and compendious manner, the following way may be made use of.

Build an Hearth of good and fitting earth upon a firm foundation, put thereupon a Furnace [or an Arch] of good stones, adjoyn hereto an Oven, [or side Furnace] out of which the fire may play and emit its flame over all the said Hearth, and pass thereout of by a Chimny made for that purpose. Upon this Hearth put those metalline earths being broken in a Mill, and commix them with the Salt, and Coals reduced into powder, and leave them for twenty or twenty four hours, that they may be all well fired and heated red hot: For by this means, the salt makes the fugitive metal in some sort constant and able to brook the fire; and the wild sulphureousness leaves the metalline mineral, and adjoyns it self to the salt, and converteth it into a vitriol or *Sal. Mirabilis*. This twenty or twenty four hours heat, gets a constancy and fluxibility to those wild metallick veins, and doth withall by that labour so fit and prepare the salt, that it doth afterwards by an easie mutation pass into good salt peter.

After that the said minerals have gotten

themselves a better state by the said Cementation, they are to be drawn out of the Fire or Hearth, with iron instruments fit for such a purpose, and new and fresh minerals are to be put in, and to be dealt withall after the same manner as we said but now.

The minerals that are taken forth are to be broken in a Mill, and then the salt to be washed off with common water, and to be afterwards used about making salt peter, the which we have taught in the Appendix.

The light Coals [or Scinders] and unprofitable earth is to be separated by water, from the metalline part, and this metalline part, or heavier *limus*, being reduced and molten in the Furnace called *Stichofen*, yields a beautifull or pure and gainfull metal.

There are sometimes found in many places of *Germany*, wild, fugacious, and unmeltable minerals of lead, which for that they contain in them Sulphur, Antimony, or *Lapis Calaminaris*, do not admit of reduction in the Furnace called *Stichofen*, but do either go off in fume, or turn into dross. But being first roasted after the aforesaid manner, and fitted for liquefaction, the lead, comprehending in it silver too, may be thence gotten with profit, whereas otherwise they are wont to be dealt withall without any fruit, and are therefore given over. This incineration therefore is profitably used to such degenerate minerals.

Now if so be any would deal with vendible and good metals, and would have profit from them by incineration, he must proceed this following way.

II. *The manner of reducing lead into ashes, and so handling it with the spirits of salt, that gold and silver may be thence gotten with profit.*

I have at large taught in my first Century, that in the ripening of metals and other chymical operations, a greater fire is endued with stronger power than a lesser, which is easie to be understood by those that have any wit.

I just now taught the maturation and bettering of unprofitable and wild metallick earths with crude and gross salt.

But forasmuch as the gross salt and a weak fire cannot of necessity put forth so much strength as a stronger fire is wont to doe, therefore for such as desire a stronger fire than the common salt, the purer part is to be (by the help of Art) drawn out of the crude salt and to be separated from its grosness and impurity, the which is easily brought to pass by distillation. And as for these fires of salts, and the procuring them in great plenty, my writings, but especially the precedent first Century, do clearly and evidently treat of them, and this second Century will yet treat of it more.

III. *The operation of incinerating the lead, or reducing it into ashes.*

Having built a Furnace such as is for Cementation, put therein a strong iron Pot, just after such a manner as the sand cupels [or pans] are wont to be made, let there be a Grate to make a fire on, let the Furnace be bigger or lesser according to the bigness or littleness of the Pot you would put in, or according to the quantity of lead-ashes you would make. Put fire under the Pot and heat it red hot, and put thereinto so much lead as is requisite for the covering of the bottom of the Pot; the lead being molten, stir it about in the Pot without ceasing, with an iron spoon having a long handle, the which labour will turn the

lead into ashes in the space of about two hours. Take these ashes out, and put in more lead into the Pot, and repeat this labour so often untill you have gotten enough ashes. These ashes of lead are fitted to receive an amendment by the spirits of salts, and afterwards to yield their gold and silver by fusion, and that with profit.

IV. *The manner of bettering the ashes of lead by the spirits of salts, and of extracting thencefrom the gold and silver with gain.*

First of all, you must have plenty of the spirit of salt or *Aq. Regis*, as concerning the easie getting such spirits, we have mentioned the way at large in the foregoing Appendix, and will yet treat more of them in this present second Century.

Besides, you must also provide your self of red or reddish kind of flints, which (besides iron) do also contain in them a volatile gold. Out of these is the tincture to be extracted by the spirit of salt, or by *Aq. Regis*; after that manner I delivered at large in the first Century, and in the Appendix to the fifth part of the prosperity of *Germany*, and will yet farther teach more clearly and more compendiously in this Century.

These extractions are to be poured upon the lead-ashes, that they may be well moistened therewithall; the unprofitable phlegm is to be evaporated by a gentle heat, and the fire to be augmented that the spirits also may follow; of which more heavy spirits there will be enough remaining in the secret Cementatory Pot, and as much as is sufficient for the due operation upon the lead, that so being bettered it may afterwards prove a gainfull emitter of its gold and silver.

He that has a desire of exercising this labour with greater profit, may satisfie his desire, if he will but pour on such extractions twice or thrice upon the said lead ashes, that they may be con-centrated by them afore they are cemented in the Cementatory Vessel, and may be reduced into the bettered lead. For by this means, all the labours and costs will be more largely recompenced, and the more plenty of gain gotten.

This now is the making the lead-ashes, whether you do either *per se*, or by the help of the other metals, convert it by Cementation into a better metal.

V. *A brief description of the secret Cementatory Pot, which admits not of any spilling, and which is sealed with the Seal of* Hermes*, of which I made mention in the first Century.*

Build with Stones or Clay or Potters earth such a Furnace as that is, which I described in the first part of my Furnaces, as necessary for the making of spirit of salt. But let the lower part thereof be a little broader that so the Metals being cast upon the Coals may not stick to the walls of the Furnace and so be somewhat lost, but may fall directly down on the live Coals. It must be made four square and of such a bigness as may serve the purpose according as you are minded to cement a greater or lesser quantity of metal therein.

VI. *Of the Cover of the Cementatory-pot, what it ought to be, that so it may suffer nothing to goe away in fume.*

This Cover of this Cementatory Box or Furnace which I told you was to be made of the Lute of Wisedom, is

not properly a Cover but a Leaden Cistern, serving for the reception of those spirits which are driven up by the fire out of the Lead-ashes. This Lead receiver is to lie in another Leaden Cistern, which is to be filled with water, and 'tis to be so fitted to a pipe that is to come out of the Furnace, that the ascending spirits passing thereinto may be the better refrigerated by the water, and the sooner condensed, and saved for farther uses.

VII. *Of the use and benefit of this secret Cementing Pot.*

When any one has a mind to cement the Lead ashes, from which the extractions of the coloured Flints have been sometimes abstracted in the said Cementatory Box, and to graduate them, or so bring to pass that they may contain [or hold the] Gold and Silver, let him first of all fill his Furnace with Charcoal, and let him so order it that his fire may kindle by little and little till the Furnace be well heated red hot; till this is done, the Cover that is at top is to be taken so long off, that so neither the heat nor smoke may pass out at the side through the Pipe into the adjoyned Leaden Cistern.

When the Furnace is thoroughly heated, and that 'tis now time to begin the Cementation, the top of the Furnace is to be shut with its Cover, that the heat may be forced to pass through the Pipe into the Receiver. Having so done, you are to fill an Iron Spoon or Ladle of your prepared Lead-ashes, and put them into the Furnace at the fore-hole which serves for the throwing in your Coals, the which ashes are to be so put in as to cover the Coals over, but not so as to choke them but that they may have air enough to burn, and that the fire be not put out, but doe just in that manner as you are wont to distil the Spirit of

Salt. By this means all the Spirits that remained yet behind in the Lead-ashes, will betake themselves into the Receiver, and the Ashes of the Lead will be bettered by the graduating and tinging spirits, and will part of them be reduced into a body, and part will yet retain the form of ashes, and fall down through the Grate to the bottom of the Furnace. Then the Furnace is to be again filled with Coals, and more Ashes are to be put thereon with a Spoon as afore, and this labour is to be continued so long till all the Ashes are consumed.

All the labour being finished, take out your Ashes together with the lead reduced into a body, melt them in the Furnace which is called *Stichofen*, they will melt wondrous easie, then put some small part thereof to the Test, thereby to try whether or no they are enriched enough, to be turned into a Litharge and undergoe the metallick separation.

If they won't as yet brook the trial, let the Lead be again turned into Ashes in your Iron Pot, and repeat the whole afore prescribed labour, and that so often till at length the Lead be rendred rich enough in Gold and Silver, the which may be converted into Litharge after the usual manner, and separated from the Gold and Silver. The Litharge being taken away, and gathered together, and broken in a Mill, serves for farther uses in this operation. The *Regulus* of the Gold and Silver that is left upon the hearth is to be taken out and to be farther mundified in a Cupel after the accustomed way.

This is that more compendious incineration and reduction of Lead, which kind of bettering it, enricheth the operators with Gold and Silver.

N. B. That in this Cementation the sharp spirits do carry over with them some of the Volatile Lead into

the Receiver, and there it settles to the bottom; the which powder being freed from all the Acrimony of the spirits by due washings, and being then dried, may be used to all such intents and operations to which the Mercury of Saturn is wont to be used, and which is made by dissolving the Lead in *Aq. Fortis*, and precipitating it by Salt-water.

N. B. This distilled Mercury hath more hidden under it than the other hath; for it carries hidden in it a Volatile Gold, which may be separated from it and improved about the gradation and Tincture of other Metals, and that with no small profit, concerning which we will say more afterwards.

Thus, friendly Reader, hast thou my more compendious incineration and reduction into better Metals; the which I would not hide from thee, and hereby shall I satisfie those to whom the way prescribed in my Appendix is too tedious and laborious and they may make use of this way instead of that other, which withall is easier and will without all doubt yield more Gold and Silver than that other way.

VIII. *Another emendation or bettering of Lead by the graduating extractions of coloured Flints.*

Extract either coloured Flints, such as have in them Volatile Gold or Sand or Clay, by the spirit of Salt or *Aq. Regis*, and draw off the Liquor by Distillation. If you thereto add Salt afore their extraction the dissolvent will receive encrease from the Salt, especially if done in such an instrument, in which a great quantity of extracted matters may be abstracted in a few hours, without either Cucurbits or the other commonly known distilling Vessels, and the same operation may be continued a long while.

By this means, there is not onely the least loss of your dissolvent, but it rather gets no small encrease from the Salt. By this instrument also, thou maist not onely prepare great store of sharp spirits necessary for thy operation at the beginning, but likewise commodiously extract your Minerals, and separate the dissolvent again from the Minerals so extracted, so that you shall not lose the least particle of your dissolvent.

But forasmuch as all the Gold, Silver, and Copper may much easier be separated from its *Menstruum*, by this so unheard of and never seen instrument, than by the way of precipitation, 'tis altogether better and safer for a Man not to precipitate his extracted Metals, but rather draw off the *Menstruum* from them, that so he may have them dry. And though that all the spirits go not wholly off, so as that nothing of them abide with the Metals, yet they do no hurt, but rather exalt the Litharge that is put unto them into an higher degree, as it also does to the Ashes themselves of the Lead, when they are cemented together in the afore described cementing Furnace; in which Cementation the Volatile Gold is, together with the corporal Gold conserved, and which otherwise would vanish away in the common melting Fire.

But if so be that any one has a mind to precipitate the Metals extracted out of poor Mines, after the manner prescribed in the Appendix, to the intent he may after the precipitation make Salt Peter of the remaining Waters, he may reduce the *Calx*'s of the Metals, and principally of the Gold very easily and without any loss, by this following way.

IX. *The manner of reducing the precipitated and washed*

Calx *of* Sol *without any loss.*

The precipitation of Gold by *Lixiviums*, Liquor of Flints, Spirit of Urine, Solution of Mercury, hath been clearly enough described in the Appendix to the fifth part of the prosperity of *Germany*; but yet the reduction of the same was past over in silence, because of the too much hast of the said Book. Therefore it seemed unto me necessary to insert the same here, for their sakes, who have but little knowledge, or in a manner none at all in these affairs; for should I go to propound such a thing for the skilfull Chymists, I should but do what is already done, especially because he deserves not the name of a Chymist who is ignorant of the reduction of the solar *Calx*.

But forasmuch as it may so happen, that even the unskilfull may set about this extracting of the Minerals, and yet be ignorant of the way of reducing the Gold though they should have extracted it; therefore have I judged it not amiss to illustrate that reduction by my describing thereof here, the which being divers, according as the precipitation is made by such or such a means, doth also require different operations.

X. *The reduction of the solar* Calx *precipitated by the Liquour of Flints.*

Albeit that Borax reduceth every *Calx* of *Sol* to its former body, if it be therewith mixed and melted in a Crucible, yet that would prove too dear, if somewhat a greater quantity thereof be required for the reduction; for there must be of it at least twice or thrice as much in weight as is of the Gold, if you would have a due reduction of the Gold made. The reason is this, because the Flints precipitated to the

bottom together with the Gold, and so sticking on to the Gold impead its fusion so that it cannot rightly come together into its due body. Hereupon is it necessary that there should be the double or treble weight of Borax added to the Gold if you would have all your Gold return unto its former body without detriment.

But whereas there are also other matters to be found which make the Gold fusible and are not so dear as Borax is, the use of such things is to be admitted, but especially when a great quantity of Gold is to be reduced. Otherwise if it be but little Gold that is to be reduced, and you have not the aforesaid matters at hand, one may for such a small trial use Borax. But where there is a greater quantity to be reduced the following matter will be found to be far more profitable and beneficial.

XI. *How the Gold which is precipitated by the Liquor of Flints, is to be melted without Borax, by the Glass of Lead only, which is of a far meaner price.*

Take of your Gold precipitated by the Liquor of Flints and dryed, one part, of Glass made of Lead and beaten into powder, three parts; the which mix well with the Gold and put into a Crucible, which said Crucible let be put into another bigger one (for which operation the Hassion pots are most fit) that so if the Gold chance to flow out of the inner pot, it may stay in the outer and be conserved. For the Glass of Lead is of such a nature that it usually perforates or runs through the pot. Having thus done put your twofold Crucible containing your commixed matters into a wind Furnace, such an one as I have described, and when you have covered it, put Coals

under it [or about it] and urge your fire for one quarter of an hour, that all may well flow, then pour it out, and separate the *Regulus* of Gold with a stroke or two from the glass of the Lead; which said Glass hath attracted to it self all the flinty matter, and suffers the pure and malleable Gold to settle to the bottome into a *Regulus*.

N. B. If your glass of Lead be still yellow as it was before the operation, 'tis a sign that all the Gold is separated therefrom; but if it be of a green colour 'tis a sure sign that it has as yet some Gold mixed with it. For Gold being mixed with Glass shews its being there by yielding a skie-colour, the which skie-colour is necessarily changed in the yellow glass of Lead into a green; because every yellow and skie colour do in their commixtion beget a green.

Now then that you may get out the reliques of the Gold out of the leaden Glass you must proceed the following way.

XII. *By what means the Glass of Lead which as yet contains in it some reliques of Gold is to be dealt withall, that it may let them goe out of its body.*

Melt that Glass of Lead in a well covered pot, that I mean in which you suppose some Gold to be, and being well molten cast in a little iron filings, and mix it well by stirring it with an iron rod, and leave it in the fire thus molten, for one quarter of an hour, that the sulphur of the Glass may be killed by its corroding of the iron, and may let fall a leady *Regulus* wherein the Gold will be, and which (in the first melting) the Glass held up, will separate it by the Cupel from the Lead.

N. B. But here you are to observe that the filings of

the iron are to be used very sparingly to this precipitation; for by how much the more iron is added, so much the greater will the *Regulus* of the lead be, and consequently require a greater Cupel, which is not so necessary.

For put case the Glass of Lead in which the Gold is suspected to be is about one pound weight, and there is but about a *Quinta*, or certain small weight of Gold; now it is not necessary to have any more than one Lot of Lead or thereabouts, precipitated thereout of into a *Regulus*, to which precipitation is required no more than one Lot of the filings of Iron. For the *Regulus* of Lead precipitated out of the Glass, doth for the most part answer in weight, to the weight of the Iron filings used about the precipitation, or to speak more clearly, you will get so much leaden *Regulus*, as the Iron is you added.

The remaining Glass becomes black and is unprofitable for any farther melting with Gold, but yet needs not be cast away, because those *Scoria*'s do yet contain much Lead, and therefore serve to be mixt with such Pots as you have used and broken about Metals, or with other wild and hardly fusile metallick Veins, to render them fusible, being I say commixt with these, and put in the Furnace which the *Germans* call *Stichofen*, do not onely yield forth all their Lead, but withall draw out the Metals out of those matters which were mixed with them in the melting. But they are principally profitable for the melting and reducing of those Metals, which do not onely very difficultly admit of fusion by themselves, but withall do, being mixed with the Ashes of Tin, so much the more difficultly suffer themselves to be reduced by melting, unto their former bodies. But in defect of such Metals and Minerals, as are not but

with much adoe tamed by Liquefaction, you may put to that black Glass of Lead, one fourth part onely of filings, or *Scoria*'s of Iron made into powder, that so both the matters thus commixt may be molten in the Furnace *Stichofen*. So by the addition and help of the Iron, all the Lead will be reduced to its former body, and will withall extract out of the Iron whatsoever of Gold and Silver lay therein hidden; so that by this means there may be reaped a great benefit from this reduction of the Glass of Lead. But yet that Lead is to be tryed by a foregoing tryal, whether or no it be rich enough in Gold and Silver to quit the costs of separation? For if it be not, it must be used to the afore described incineration, that so there may be no loss either of the Gold or the Lead.

XIII. *The preparation of the Glass of Lead, for the reducing such Gold as being precipitated by the Liqour of Flints, is of difficult fusion.*

Take of white and fusile Flints [or Pebles] one part, and of *Minium*, or any other Ashes of Lead, or else even of Litharge it self four parts, each of which being powdered apart, you are to commix and melt them well in a strong double Pot, then pour them out, and you will have a Hyacinth-coloured Glass, the which Glass is to be powdered and mixt with the Gold, and it makes the Gold Powder which resisteth melting fusible.

XIV. *Another way of reducing Gold precipitated by the Liqour of Flints.*

To one part of this hardly-melting Gold which is precipitated by the Liqour of Flints, admix two or three parts of Litharge, which matters put in a strong double Pot, and cover it well, and melt them well

down in a Wind Furnace, that the Litharge may draw unto it self all the Flints, and all the Gold may separate. Having separated the *Regulus* from the *Scoria*'s of the Lead, you must precipitate these *Scoria*'s, which do as yet hold in them some small portion of Gold into a small leaden *Regulus*, with the filings of Iron, as we shewed you but now, that so you may also have even that residue of Gold. The *Scoria* are conserved by being reduced in the Furnace *Stichofen*, according to the operation already spoken of.

XV. *Another way of rendring the Gold precipitated by the Liqour of Flints fusible.*

Take of the said Gold one part, and the fixt Salt made of Salt Peter and Tartar, by combustion or calcination, three parts; commix them and melt them down in a crucible well covered. In this co-melting the Salt swallows up the Flints, and the Gold being at liberty settles to the bottom. Pour out the molten mass, and separate the *Regulus* of the Gold from the Salt, the which being dissolved with common water gives you your Liqour of Flints, to be again used to precipitate more extracted Gold.

This Salt doth not so easily perforate the Crucibles as those Glasses of Lead do, and therefore is it to be accounted of as the best and easiest of all these three prescribed ways.

XVI. *The way of reducing Gold, precipitated by the spirit of Urine.*

The spirit of Urine or of *Sal. Armoniack* doth perfectly precipitate all the Gold out of the *Aq. Regis*; the which being washed and dried, doth not admit of reduction after the manner of the other Gold, for if it

be but onely heated a little before it becomes red hot, it presently takes fire, and fulminates with a far more dreadfull noise than any Gunpowder. For if you put a small portion of the same, and no bigger than a Pea in a Silver, Iron, or Copper Spoon, and put it on the Coals that it may wax hot, it will give such an horrible crack, that 'twill even dull the hearing, and make a dent in the Spoon as if it had been beaten in with a Hammer. From whence it may easily be conjectured, that if somewhat a bigger quantity be put in a Pot on the Fire, it would make Pot and Furnace flie, by its so dreadfull thundring a stroak into most small shivers.

So then there is need of great wariness, to prevent the happening of so great danger, which is easily prevented by the following manner of operating.

XVII. *By what means the fulminating force of Gold precipitated by a* Lixivium*, or spirit of Urine is to be taken away.*

Mix with this Gold precipitated by a *Lixivium*, or by the spirit of Urine, half a part of Sulphur reduced into Powder, and let the said Sulphur be removed therefrom by burning amidst live Coals; for so being despoiled of that fulminating force, it may without danger be reduced by any kind of such matters as promote fusibility.

XVIII. *By what means Gold that is despoiled of its fulminating force, by means of Sulphur may be reduced.*

Forasmuch as this Gold is void of all impurity, there needs [not] the addition of such matters as promote fusion, seeing it is of it self prone enough to melt. But yet least some grains of the Gold should stick on to the Pot, 'tis expedient to add some portion at least

of such a kind of matter as accelerates or hasteneth fusion. And for this work, Borax, and the dry Liqour of Flints are excellent, of which if you add but one half part onely to such Gold, (or, if you take of the Flints prepared with Salt of Tartar) it will by that means presently melt, and the Borax, or Liqour of Flints will not retain the least doit of the Gold.

XIX. *The manner of reducing the Metals that are not gotten out of the Waters by precipitation, but are freed from them by abstracting them.*

The Metals which are extracted out of the Mines, and freed from the waters by the abstracting of the dissolvent, cannot be so pure as those are which settle to the bottom by precipitation. For it is very rare for Gold and Silver to be found in metalline Veins, Stones, or Clay, without being commixed with other Metals; because for the most part, Copper is mixt with Silver, and Copper or Iron with Gold, the which being unseparated in the reduction makes the Gold and Silver impure. But now in the precipitation one Metal is freed after another from the *Menstruum*, and are not mixed with each other. But on the contrary, in the way of abstracting it, all the metals remain mixt together without any separation, and require a new separation and consequently a double labour, and more expences.

This inconveniency may be easily remedied by him who is versed in the knowledge of my dry separation of Metals. I have mentioned it in divers places of my writings, So that it would be needless to trouble the Reader with a superfluous rehearsal of the same in this place.

But forasmuch as every one hath not by him all my writings, I believed that it would be worth while, if I

should here set down that Laver or Bath which washeth off the Metals with the help of Salt peter by the dry way. For, without the knowledge of this Artifice of separating the extracted Metals from each other, there would be yet requisite much labour, and much costs for the obtaining of the said Metals. But they are very easily, and with little labour, and with small costs separated the one from the other by the way here by us described, and indeed with more gain than is wont to be had by the way of precipitation.

And even as in the precipitation of Metals there is always some [portion] of the Waters, that puts on the nature of Salt Peter, *viz.* when the Waters that have been used, which are as it were the Seeds of Salt Peter, are implanted in an Alkalisate Salt, and so do multiply themselves in a wonderfull manner.

So likewise in the dry separation of Metals, there is in a manner, yet more Salt Peter gotten, *viz.* thus when they are separated in the melting Pots, from each other by Salt Peter, and by an artificial precipitation of one Metal after another, the Salt Peter you used is rendred fixt and Alkalizated, which Alcalizated niter is to be accounted of, as the root of Salt Peter. This root being implanted in acid Salts, is in like manner enriched with a plenteous encrease, and reduced into natural and inflamable Salt Peter; for, by it do the sharp Waters get to themselves the nature of Salt Peter, from those Alkalizate Salts. And if so be you seek not after the common Salt Peter, it is better to sow the Seed of Salt Peter (that is, some spirit of niter which you have used) into the appropriate root of Salt Peter, that is, into fixt niter. For by that means you will have (at the encrease) a wonderfull Salt Peter, which, in all operations, doth far more powerfully act than the common Salt Peter,

what way soever it be mundified by; which is evidenced in my foregoing first Century.

Therefore forasmuch as in the separation of Metals by the dry way, there remains (after the operation is over) so much fixt Salt Peter as there was of nitrous Water in the moist extraction, it always abundantly supplies both Seed and Root of Salt Peter, so that they may be exceeding plentifully multiplied by other Salts, nor will you have any need of buying any more new Salt Peter for the now spoken of Labour. Verily this is a most compendious way, not onely of separating all Metals even in fusion, but also of somewhat bettering them, as shall be afterwards demonstrated.

XX. *By what means such Gold as is commixt with Iron, or Copper, and from which (being extracted out of the Minerals) the dissolvent has been drawn off, is to be reduced.*

Let such unclean Gold be commixed with two or three parts of its weight of the Glass of Lead, and melt them in a strong Crucible. If there happen to be much Iron, it will of its own accord yield a leaden *Regulus*, which being forced by the heat of the Fire in a Cupel will leave your Gold pure, because the Glass of Lead is wont to attract unto it self Iron and Copper. But if so be there is but little Iron mixt with your Gold the *Regulus* of Lead will not separate or precipitate in the melting, and therefore as it melts some filings of Iron are to be added, and to be accurately stirred with a red hot Iron, that so a *Regulus* of Lead may fall to the bottom, bigger or lesser according to the muchness or littleness of the Iron you added.

XXI. *Another proper and fitting matter to reduce such Gold as hath Iron in it.*

Take of Salt Peter one part, and of Antimony four parts, reduce them into a black Glass, by melting them. This Glass being powdered and commixt with a wild or raw and not fusile Gold and so molten, precipitates the *Regulus* of the Gold to the bottom, and brings the Iron into *Scoria*'s.

XXII. *The separation of the Antimony from the Gold.*

Such golden *Regulus*'s do not admit of separation in the Cupel, like as those do which the Glass of Lead is used to. Therefore Salt Peter is to be used in the melting Pots or Crucibles, to make the separation of them.

Put this Antimonial *Regulus* in a melting Pot, melt it down in a Wind Furnace, and being molten cast in by little and little some dry Salt Peter, that so it may seize upon the *Regulus* and transmute it into *Scoria*'s. The *Scoria* flowing in the Pot like water, are a sign that the Gold is well cleaned, and that all the Antimony is reduced into *Scoria*'s. Then pour it forth into a Cone that it may cool, and the pure and malleable Gold will settle into a *Regulus* at the bottom. Now all the Salt Peter is rendred fixt in this operation, then if you put your *Scoria*'s again in the Crucible, and put into it some Coals and melt your *Scoria* down, almost all the Antimony being freed from the Salt Peter will gather into a *Regulus*, and will again serve for reducing of more Gold; for it will as readily reduce your extracted Gold unto its former body, as the [aforesaid] Glass it self will. But this labour requires a diligent Operator who knows how to handle it with singular skill, though it be easie, and requireth not any great Artifice, but onely an

accurate diligence, which use onely makes a Man skilled in.

The Salt Peter used about this labour, gets the nature of an Alkali Salt, and being put on the live Coals doth no more burn, but being dissolved in Water yields a sharp *Lixivium*, very proper for many operations, and serving instead of a Lye made with Wood-ashes. But the chiefest use thereof is this, *viz.* seeing it is the true root of Salt Peter, it may be added to other Salts, out of which in process of time, it will be notably augmented and produce new burning Salt Peter. He that has a desire gainfully to augment this fixt Salt Peter with common Kitchin Salt, and again to transmute it into inflamable Salt peter, may accomplish his desire if he makes use of the following operation.

XXIII. *The way of making most excellent and inflamable Salt Peter in plenty, and with profit out of common Kitchin Salt and the* Lixivium *of Salt Peter that has been used.*

There is so small a difference betwixt common Kitchin Salt, and Salt Peter, that the Salt may easily be turned into Salt Peter, and that by several operations, as well by the Seed of Salt Peter as by sharp spirits, as we have taught above, or even by fixt niter which operation we will here shew.

We will use for an example, the baking of Bread, and the brewing of Ale. If when the Meal is with Water brought into Dough, there be added unto it but a few grounds of Ale or Leven, the whole mass begins to heave it self up, and becoming thin [or light] is rendred fit to be baked into Bread, the which hath altogether the same property as those few Ale Grounds, or that little Leven had. And so

that very self same Dough is likewise fit to make other Meal ferment, even to infinity. The same is likewise observable in the brewing of Ale, so that he who hath but once onely so much Ale Grounds [or Yest,] or levened Dough as served his turn once, may brew Ale and bake Bread even to infinity. So likewise is the same evidently manifest by the encrease of Vegetables, which may be infinitely multiplied by the Alkalizated Salt of the Earth, if you have but once their Seeds and Roots. In like manner may the same propagation be performed by another way, *viz.* by ingrafting of that which you would propagate into another of the same kind. For example, I have in my Garden excellent Apples, Pears, Cherries, or such like Tree-fruits, and I have a mind to see more of them in my Garden; therefore do I cut off some branch, or perhaps even the Tree it self to the trunk or body; of some wild, or at least not so noble a Fruit-bearing Pear Tree or Apple Tree, and therein, *viz.* in that branch or stock, do I ingraft according to Art some little boughs or cions of some other Tree that bears excellent Fruit, and which I desire to encrease, the which Tree now doth no more produce the wild and degenerate or bad Fruits, it did according to its kind, but such Fruits as the Tree whence the cion was taken, bears.

By these kind of similitudes may any one that hath understanding easily see, that it is possible by Art, to transmute one nature into another, if, *viz.* the Seeds and Roots of things are applied to this transmutation. But now if any one should plant a stalk or leaf in the digged earth, and would thereby encrease or propagate it, he will never see any success of his labour; for the stalks and leaves would rot and so no new Herb would again bud out from them as is wont to be out of the Seed and Roots.

Even on this wise is it with Salt Peter, which if it be mixed with common Salt it would not verily produce any encrease, as 'tis wont to do out of its Seed and Root, as we have already laid open.

Such likewise is the nature of Metals, touching the propagation and encrease of which their proper seeds and roots are requisite. What I pray are those Tinctures, (one onely particle of which and that no bigger than a Pea, being cast on an whole pound of Tin or Lead, transmuteth that same Metal into pure good Gold, and changeth and augmenteth it self (as being the true seed of Metals) a thousand fold, out of so gross and earthly a body into so noble and so golden a nature in so short a space of time,) what (I say) are those Tinctures, but the very seeds of Metals, and the very metallick roots. But by what means they are to be obtained, and to be brought under a Man's power, for my part I do not know. But yet I could not but deliver my simple opinion and conceptions concerning this thing, to the studious of Art.

'Tis certain that all Metals have their rise out of one and the same Seed, but that they differ so very much amongst themselves, and that one becomes more ripe than another, is to be imputed to the diversity of accidents. In one and the same Tree are produced Blossoms, and small Fruits of an unpleasant tast; then afterwards bitter and immature ones, and at length ripe and sweet ones, and are not alike either in form, odour, or savour, nor are they of like effects, and yet do they all arise out of one beginning, *viz.* out of their Seed and Root. So is it even with Metals.

For as touching their Seed I do verily believe, that if from the most soft and as yet most immature

Metals, such as *Zink*, Lead, Tin, Antimony, Bismute, Cobolt, *&c.* their stinking combustible and superfluous Sulphur, could by some Bath or other be so taken away, as that nothing may remain save onely a most pure Mercury, that then I say such a Mercury, or such a Seed of Metals may be easily transmuted by pure Gold, as being the most pure Root of Metals into a true Tincture.

But to turn common Salt into Salt Peter, the operation is thus.

Take one part of black or of any other common Salt, and mix it with two or three parts of *Calx-vive* being reduced into Powder by lying in the Air, and lay it in such a place as lies open to the Air and Sun-beams, but yet keeps off the Rain, as we have taught in the Appendix.

Moisten this heap with the above said *Lixivium* of Salt Peter, and being dried, repeat the moistening and drying so long, untill the ferment shall have converted all the common Salt and turned it into inflamable Salt Peter, the which doth either sooner or later happen, according as the operation hath been the more diligently or negligently handled. All being turned into Salt Peter, let an extraction be made with common Water, as the usual custom is, and lay the Reliques in the aforesaid place, and again moisten them with the said *Lixivium* as afore, or in defect thereof sprinkle them with common Water, still moistening them after each drying, untill there be a new encrease of Salt Peter begotten, the which you are to wash off with common Water. And so this operation proceeds, or holds on even to infinity.

XXIV. *Another far more compendious way of converting common Salt, by the help of fixt Salt*

Peter into excellent Salt Peter.

Mix some certain weight of common Salt dissolved *per se* in common Water, and as much of fixt Salt Peter likewise dissolved in common Water, mix them in a wooden Vessel; in which Vessel the fixt Salt Peter being as it were a ferment will seize upon the common Salt, and turn it by fermentation into excellent Salt Peter.

He that desires a more mature Salt Peter may instead of the solution of common Salt, pour upon the fixt Salt Peter *Lixivium*, those sharp waters of Salt Peter, which have already been used about other labours, and they will seize upon that *Lixivium* with a more vehement operation, so that of both the solutions as well the acid and spiritual, as the fixt and corporeal Peter, there will be gotten in a few hours space, the most excellent Salt Peter and such as cannot be by any other way whatsoever purchased.

N. B. If any one has a mind of getting a greater quantity of Salt Peter, he may first dissolve his common Salt in the sharp Water of Salt Peter, and [mix it] in that self same *Lixivium*, [*viz.* of Peter,] and after the mixing of these two contrary solutions evaporate the common Water, that the Salt Peter may shoot into Crystals, of which there will indeed be a greater quantity, but then it will not be so good as that which was made by the first operation.

XXV. *Another gainfull way of making good and burning Salt Peter out of common Salt, by the help of fixt Salt Peter.*

Commix equal parts of the *Scoria*'s of fixt Salt Peter that you have used, and of the common Kitchin Salt

together, and add thereunto twice as much *Calx-vive* first reduced into Powder by lying in the Air, [as they both weigh.] Of this mixture make up round Balls, and so pile or stow them with Wood, that it may be a *Stratum Superstratum*, [or a Bed of each orderly,] as the Chymists call it. Kindle your pile of Wood and let all your Balls be red hot for an hour: And the fixt Salt Peter will by a wonderfull inversion transmute the nature of the common Salt, and turn it into Salt Peter, but yet not inflamable till the Salts have been moistned some due time, and so attracted a life out of the Air, and made fit to conceive a flame, or to burn.

N. B. If instead of Rain water you use such Waters as you have already used and extracted your Minerals withall, to moisten your mass with, then will you thence get in some few Weeks space, an inflamable Salt Peter.

But forasmuch as in the extraction of Minerals and separation of Metals, there will be such a great quantity of sharp nitrous Waters, and likewise of fixt Salt Peter offer themselves for the accomplishment of this operation, and so great a benefit and gain is gotten by that so plentifull an augmentation of your Salt Peter (which hath already Sufficiently profitably paid your costs) out of vile and common Salt; hence clearly follows, that all those hitherto described labours and operations are effected, in a manner without any costs or expences, which is indeed an unheard of thing, but yet most true, and exceeds the belief of ignorant Men.

XXVI. *The reduction of Silver extracted out of the Minerals, and freed from the* Aq. Fortis *by abstraction, [or drawing off the said* Aq. Fortis*.]*

The Silver from which *Aq. Fortis* has been drawn by Distillation, needs not any matter to help on fusibility, for as much as it doth of its own nature admit of a very easie Flux; but that the Fugitive Spirits that adhere unto it would carry away somewhat of the same. So now, to prevent this discommodity, you may add unto such a Silver a little of the fixt Salt separated out of the *Lixivium* [of fixt Peter,] the which Salt Alkaly will mortifie the acid spirits so, that they shall not be able to carry off any thing at all in the melting.

XXVII. *The reduction of extracted Copper.*

If the Copper be not mixt with any other Metals, and be but little in quantity, it may be reduced so in Crucibles by it self, but if it be in a plentifull quantity it may be done by blast.

But where it contains Iron or *Lapis Calaminaris*, (which two the Minerals [of Copper] do frequently abound withall) there it admits not of reduction per se without the help of other matters, because of the Iron, *Zink*, or *Calaminaris*; which Minerals associating themselves with the Copper, in the melting are wont to make it brittle. But this inconveniency may be prevented the following way.

XXVIII. *The way of making Copper, which hath Iron in it malleable by reduction.*

Mix such Copper as hath in it *Lapis Calaminaris* or Iron, with common Salt, and put it in a Crucible and melt it, that so the Salt may associate or draw unto it self the Iron or *Lapis Calaminaris* out of the Copper, and turn them into *Scoria*'s, leaving the Copper, which will settle to the bottom and go into a *Regulus*.

XXIX. *By what means Copper is to be separated from the Silver, if they are both together extracted out of the Mines, and the Silver has not been precipitated out of the solution by the Water of Salt, but the dissolving* Menstruum *hath been abstracted from them so conjoyned both together.*

If the Silver be more in quantity than the Copper, then the Copper is easily extracted out of the other by the Water of Salt wherein a little Tartar hath been dissolved. For Salt and Tartar do readily dissolve Copper, and leave the Silver.

But if the Copper bear the Bell, and there be more of that than the Silver, then will it be better to precipitate the Silver first by the Water of Salt, out of the first extraction of the Minerals; and afterwards the Copper will be likewise freed by abstracting the dissolving *Menstruum*, insomuch that each of these two Metals are gotten apart.

XXX. *If the extracted Copper comprehends in it any Gold, by what means the Gold may be therefrom separated.*

Albeit if a solution of *Saturn* or *Lune* being poured on the dissolved Copper, and well shook with the same solution will fish out some Gold, yet it gets not all unless it be debilitated by some *Lixivium*. But now the *Lixivium* being poured thereunto that so the solvent being debilitated may the easier let go its Gold thereby, hath with it this inconveniency, *viz.* that the solvent is made wholly unprofitable to be used about any more extractions. Nay more, there's also this discommodity, that if an error be committed by pouring on a little more *Lixivium* than is expedient, there will also precipitate some of the Copper together with the Gold.

To prevent therefore these inconveniencies, the solution of the Copper which contains in it Gold, is to be drawn off even unto driness, in my secret and by me invented distilling Vessel, in which Vessel it may easily and in great plenty be done; and the following *Menstruum* which dissolveth onely Copper and not Gold is to be poured upon the dried matter, that the Copper may be dissolved, and the Gold (be it either much or little) may remain in the bottom undissolved. The dissolved Copper may be precipitated out of the Water with a *Lixivium*, whereto is added some of the Liqour of Flints, and be washt and dried, and with strong Vinegar be turned into a most delicate Verdigreace. The Water that is thus made use of, if it be poured on Alkalizated Salts yields good Salt Peter.

He that does not much regard that green colour may separate the dissolvent from the Copper by Distillation, and again use the same for the like dissolving of new Copper.

But now there must be in the Copper So much Gold as to quit the costs of this labour, and to prove gainfull; otherwise it is better to leave the Gold with the Copper than to buy it at so dear a rate.

XXXI. *The making of such a* Menstruum *as dissolveth the Copper and drives from it self, or precipitates the Gold.*

This dissolvent is no other than *Aq. Fortis*, wherein a little Tartar is dissolved. For the Tartar being an enemy to the Gold, is wont to precipitate the Gold out of the solutions like as common Salt doth Silver out of *Aq. Fortis*. By this way may all the Copper be easily separated from the Gold, concerning which,

more shall be spoken in its due place.

XXXII. *Another reduction of Copper that hath Gold in it, and the perfect separation of the Copper from the Gold.*

Add to such Copper that hath Gold in it, some Silver, and melt it with so much *Regulus* of Antimony as is twice the weight of the said Metals thus together taken. Separate the said *Regulus* together with the Copper from the Silver by the addition of Salt Peter, that so the Silver may retain with the Gold that was in the Copper, the which is to be afterwards separated if it be worth the while. Now it is not necessary presently to separate it, forasmuch as it is far better many times to abstract such a Copper that has Gold therein from such a Silver, that so the Silver may be enriched with a great quantity of Gold by so many abstractions; the which abstractions require but very little costs besides the charges of the Fire and Crucibles.

For all the Salt Peter used hereabouts, together with all the Copper and all the *Regulus* of Antimony may be thencefrom again recovered, by him who rightly knows the precipitation. Besides, there lies hid under this operation, some great matter as concerning the amending of the Metals. For it is a way of arriving to the knowledge of impregnating all Silver by Copper, with Gold, and Copper it self with Silver; concerning which thing there are more instructions to be found in other places of my Writings.

These things may at present suffice, touching the reduction of the Metals extracted out of the poor Mines, and [concerning those things which by reason of the hasty Edition of the Appendix to the fifth part

of the prosperity of *Germany* were omitted therein;] the which defects the well minded Reader may from hence supply.

XXXIII. *A brief description of the above mentioned artificial Instrument, by the help whereof the spirits necessary for the extraction of the Metals out of the poor Mines that contain in them Gold, Silver and Copper, are plentifully prepared, the Minerals themselves extracted, and the dissolving* Menstruums*, again easily separated from the Metals.*

This incomparable and by me newly found out Instrument, being most profitable and commodious for the easie extractions of Metals, and preparations of the dissolving *Menstruums*, is made of a peculiar earth, and is almost of the figure or likeness of a Bakers Oven, and is either of a bigger or lesser size, according to the quantity any one has a mind to labour in; In the forepart it hath a Door, and in the end [or top] or very near it, it hath an Outlet. To the Cover serving instead of an Alembick, a great receiving Vessel is to be fitted, fit for the reception of the outgoing spirits. After that the Furnace is heated, the prepared Salts being put in peculiar Pots or Crucibles made of the best earth are to be put with a pair of Tongs prepared for this peculiar use into the Instrument, and all the spirits will be drawn off with a speedy Distillation. Now there is no danger here of breaking the Instruments, and the Distillation may be done in the space of one or two hours, how great a quantity soever of Salt was used to the Distillation. When the Distillation is over, the Pots that were put into that Instrument or Furnace are to be again taken out with your Tongs, and presently other Pots filled with Salts are to be put in the room of them you took

out, and the spirits again driven out by a new Distillation. This labour may be kept on as long as one pleaseth, or as long as he hath any matter to distill withall; because the Vessel never cools as long as the Distillation is continued. This Furnace therefore is most notably fit for the Distillation of a great quantity of Salts, and that by a labour which is so exceeding speedily finished.

The same way of Distillation is to be observed in the extraction of Minerals or Metalline Earths, the which can be far sooner extracted and far speedier this way, than by that described in the Appendix which is to be done by heating the Glasses.

After the same manner is the dissolving *Menstruum* it self speedily again abstracted from the extracted Metals, and being thereby preserved without any loss is to be applied to farther use. This Instrument therefore doth so compendiously and easily dispatch all those said labours, that (set aside your Fire and Salt) the plentifull making your spirits, the abundant extraction of the Minerals, and the separation of your *Menstruum*'s from the extracted Metals and its preservation, are in a manner done without any costs.

XXXIV. *Now follows an explication of some secrets effected by the help of my* Sal. Mirabilis*, concerning which there is mention made in the second part of* Miraculum Mundi.

It is clearly evident from many places of my Writings, and principally in the second part of *Miraculum Mundi* that my *Sal. Mirabilis* is diversly prepared; hence it follows of course, that the use thereof is different. For it hath one use when (after the spirit is thencefrom distilled) it is taken out of the Cucurbit,

and hath as yet a corrosive nature. Contrarily, it hath another kind of use when this corrosive Salt is dissolved in common Water, and filtred, and set in the cold, that so the best part thereof may shoot into long Crystals, which having no corrosive power, serve for a peculiar use. It hath likewise another use when it is deprived of all corrosivity and turned into a sweetness, as I have shown in many places of my Writings. This is to be known by such as would use it, for this or that labour, that so they may commit no error, but be thereby rendred Masters of their desires the more easily.

We will therefore make inspection into some of those principal secrets which are declared in the second part of *Miraculum Mundi*, and examine whether or no they can be effected after the same manner I prescribed?

XXXV. *By what means any Water, Wine, Ale, Vinegar and other liqours may be coagulated in a few hours space into hard pieces like Ice, by the* Sal. Mirabilis.

For such a coagulation of all watery and moist things, well edulcorated (as the Chymists phrase is) *Sal. Mirabilis* is to be taken and such as is shot into long Crystals, prepared of an equal weight of Salt and good Oil of Vitriol, because a most great driness ariseth from the Oil of Vitriol.

Such an excellently well prepared *Sal. Mirabilis*, and which is shot into long Crystals, is to be reduced (by calcination in the Sun) into a fine powder, that so it may lose all its moistness and yet not melt. For if it melts, then it would need grinding again; one part of this calcined *Sal. Mirabilis* is able to coagulate

three parts of Water, Wine, Ale, or any other liqour which it is mixed withall, into a dry matter like to Ice, insomuch that it may be carried in a Sack or a Sieve full of holes.

But what use such a coagulation may serve for, would be too tedious to declare in this place. Any one will find what use is to be thereof made, if he well meditates upon the thing.

XXXVI. *The separation of the Water, Wine, or Ale, from the* Sal. Mirabilis.

The coagulated liquors may be commodiously separated from the *Sal. Mirabilis* by Distillation; but the aquosity of the coagulated Wine and Ale are to be separated onely by Distillation, and the grosser part remains behind in the Cucurbit with the Salt. But the *Sal. Mirabilis* is by calcination, again freed from all impurity, and again made white and fit for any other such like new effect.

N. B. I doubt not but that there are other ways of coagulating watery liqours into Ice, concerning which we shall say somewhat in their due place.

XXXVII. *How the sharp spirits of Salts, as* Aq. Fortis*,* Aq. Regis*, Spirit of Salt, Spirit of Vitriol, of Allum, and the like may be coagulated into hard Salts, not unlike to frozen Water.*

This coagulation of sharp Spirits out of Salts, is done the same way as the coagulation of common Water, and other sweet liqours is performed by; but the separation ought to be done in Vessels of the best Earth, or in Glass, because of their sharpness. And certain it is, that with these coagulated Spirits of Salts many things of great moment may be done, the

mentioning whereof we for brevity sake do here pass over.

For I have purposed to demonstrate at this time, some secrets onely which are mentioned in the second part of *Miraculum Mundi*, and to assert the truth of them.

By these two described coagulations any one may easily learn that the coagulation of other moist things are possible to be done.

XXXVIII. *How the head of a fountain may be stopped up by this* Sal. Mirabilis.

It sometimes happens that there breaks out a Spring of Waters in some places where it proves offensive and hurtfull. And forasmuch as they are sometimes very difficult to be stopt up, I will set down a way in this place of stopping it by *Sal Mirabilis*, but chiefly to this end, that the nature and property of things may be throughly learned, and besides, that even Arts and Sciences themselves do sometime bring no small help, especially when no counsel avails. Take therefore of your *Sal Mirabilis*, heated red hot as much as is sufficient, wrap it up in a linnen cloth and thrust it into the hole of the Fountain, and it will be turned with the Water into an hard Stone, and thereby enforceth the Fountain to seek it self some other passage.

XXXIX. *The way of separating the Phlegm from subtile Spirits.*

Because the Volatile and sulphureous Spirits of Salts are of great efficacy in Medicine, and principally when their Phlegm or aqueous humidities are removed from them, the which thing every one can't

bring to pass, I have therefore judged it worth while, even for the sake of the Sick, to discover an easie way of so doing, by my *Sal. Mirabilis* as follows.

Fill a Glass Cucurbit half full with *Sal. Mirabilis*, pour thereupon the Volatile Spirit of Vitriol, Niter, or common Salt, and distill thence by B. the most subtile Spirit, the which will come off, and leave the unprofitable Phlegm behind with the *Sal. Mirabilis*, the which (by heating red hot) you may again render fit for new operations.

XL. *Another and easier way, yea even almost an incredible and miraculous one of freeing Wine, Ale, Vinegar, Brandy, and all other moist liquors from their unprofitable Phlegm in a moment of time, by my* Sal. Mirabilis.

The precedent coagulation of moist liquors ariseth from that most great driness which lies hid in the *Sal. Mirabilis*. But this way we now deliver, proceedeth from the concentrated cold of moist Fires, which Fires we have treated of in the first Century, and 'tis thus.

Take one pound of the abovesaid *Sal. Mirabilis*, put it in a strong Glass, and pour thereupon two parts or pounds of the con-centrated and cold Fire of some Salts, whether it be of Vitrol, or common Salt, or Salt Peter, whose Fire excells the Fires of other Salts; and let them lie quiet for some hours, and there will be made an Icy mass of them both, the which you shall in the Winter time set out in the Snow or in some cold place which by how much the colder so much the better; where the longer it abides in the cold, the more will the cold Fire be con-centrated, and consequently so much the greater matters may by such a con-centrated body be effected.

XLI. *The receiving or catching the breath of Men, as they sit in some warm Stove, and the changing it into the form of Ice.*

If thou hast a mind to create a kind of admiration amongst thy Guests or Friends when they are with thee, and to give them some profitable recreation, you may accomplish your desire the following way.

Carry with thee a Glass full of the moist Fire of Salt, and which is coagulated by the *Sal. Mirabilis*, and hath stood some hours in the cold, into the warm Stove, and hang it up over the Table by a thread or small line, when your Guests are set at the Table, and when they ask you what this signifies, you may tell them that you will for their Recreations sake, shew them some pleasant diversion; after they have made an end of eating and drinking. Upon this they will all of them have a desire to see those tricks and ever now and then cast up their eyes upon the Glass. But after that the Glass has there hang'd a minute or half minutes space, the breath of the Men that sit about it will presently apply it self to the Glass, and stick on to the outside thereof like Snow, and cover it all over; and thicken more and more, insomuch that in a short time it will have a thick and hoary beard, all about consisting of natural Ice; and will so long keep on its encreasing as the con-centrated cold lasts in the Glass. Then at length the Glass growing a little hot, after the internal cold of the con-centrated Fire is consumed, that Icy beard begins again to melt and being resolved, to distill into a Water, for the receiving of which distilling drops some Vessel is to be set under. This is a wonderfull Distillation of Men's breath, which coming out of their mouths in their discoursing, is reduced by the concentrated Fire of Salt into Ice, and

at length, again into Water by the heat of the Stove.

This so speedy an operation or transmutation of a moist and watery vapour into natural Ice, seems indeed at the outside view to be but a vile and unprofitable thing; but if it be but well minded by the sight of the internal mind, it not onely begets a most great admiration, but withall opens the most excellent knowledge of natural things.

Such as greedily hunger after Gold will say, what benefit comes from these tricks? had Gold but distilled from the Glass we would have saved it, what need we any Water? or if it had been noble or generous Wine, we could have prized such an ingenious knack, and drunk it off. Take away that filthy Water and bring us the gallant Wine. Such discourse as this, let one of thy Friends purposely utter, being thereto first suborned by thee, that so thou maist the more delight the rest of thy Friends that are ignorant of these things, by thy presently satisfying him that is so desirous of Wine, saying, that if thy Friends and Guests do desire better Wine, thou art ready to draw it them. Upon this, thy Guests will diligently listen and desire to see what better Wine thou wilt draw them out of thy Celler. The chiefest of these will well know that thou hast not in thy Cellar such variety of Wines.

In the mean while, have ready some small Glasses which contain some Ounces, filled with the concentrated Fires of Salts, and well shut and strings tied ready unto them; now when thou hast a mind to give them a relish of thy Art of bettering Wines, and rendring them more generous, command a Cann of common Wine to be brought thee, and give it to thy Guests to drink. But now when they shall perceive that it is the same sort of Wine they had formerly,

and that thou hast not given them any better, thou shalt satisfie them by the following way.

XLII. *A momentary operation of rendring any common Wine more generous, and exceedingly bettered by the cold Fires of Salts; and that in the presence of many Men.*

Command one of those Glasses prepared for this purpose to be brought unto thee, and let it down by the thread into the Glass full of Wine, which being done, the con-centrated cold that lies in thy little Glass, which thou hang'st in the greater one of Wine will draw to it self the watery and unprofitable parts of the Wine, and change it into an incipid Ice. And by how much the longer you leave that little Glass in your Wine, so much the more Water will be drawn there out of, and the Wine will be made the more generous thereby. But the sooner you take it out, the less Water will be separated; so that out of one Cann of Wine you may by this means give your Guests several sorts of Wine to drink, or rather may let them better the Wine themselves even according to their pleasure. For by this operation the unprofitable Water being drawn out of the Wine and turned into Ice, is separated and taken away; part therefore of the Water being taken away, the remainder must necessarily be much more efficacious and more sweet than it was afore, when it had Water conjoyned as yet with it.

A Master of a Family using this Artifice may make for himself and his Guests, divers Wines though drawn out of one Barrel.

Now such a secret is not onely full of Curiosity, but also of profit, and may prove helpfull and do much good several ways. I could if need required declare a

thousand conveniencies, and Commodities proceeding therefrom. But because I judge it needless to spend time in declaring them, I will at present mention onely some few, remitting the rest to the following Centuries, in which shall be made mention of them according as the [matter and] time requires or permits.

XLIII. *The amending of any midling or smallish Ale in the Winter Season, as well at Home as Abroad.*

It sometimes happens that a Master of a Family hath but onely one sort of Wine or of Ale in his Cellar, the which he is accustomed to drink, and puts not in his Cellar any better Wine or Ale either by reason of poverty, or else because the Cellar lies open to every body, both Men-servants and Maid-servants, and they will to the best Tap, and so he fears it will be too chargeable.

But forasmuch as old Men's Stomachs, when they sometimes feed on Stock-fish dried, or on Martelmas Beef, or Fish, by reason of its debility through old Age, cannot perform its office of Concoction: The Ale or Wine may by the help of this secret be presently rendred stronger, especially in the Winter Season, in which Season a warmer and stronger draught of Ale and Wine is more beneficial than in the former months, and then they can better brook the want of the same. But some may object and say, where shall I get such a concentrated cold as may enable me to extract the Water out of the Wine? hereunto I answer that there will be many that will prepare it for time to come and will spare it to others; and yet no body needs so great a quantity thereof neither. If a Master of a Family hath but one onely half pound of the same, he may use it his whole life time, if he but

keep it so as that the Glass break not and spill it. For when he hath taken away the Water of one or two Pots of Ale or Wine, let him remove the Ice from the Glass, and set it again in the cold till he needs it. For such a cold concentrating Magnet always keeps its virtues, and is never corrupted, but always fit for the effecting of many wonderfull things.

N. B. If you have not those fires of Salts the heavy Oil of Vitriol, Oil of Salt, or *Aq. Fortis* may be used hereabout; but yet these Oils do not in any comparison perform what those concentrated Fires of Salts are able to effect. But however they demonstrate the thing it self though they bring no great store of profit, and this any one may easily understand.

For there is a great difference betwixt the watery and not watery Fires of Salts, any common and simply bare Water cannot become so cold as the Water of any Salt, and this Salt-water cannot be so cold as a common Spirit of Salt, nor can this Spirit by any means arrive to that degree of cold as a concentrated Spirit usually attains to. So a skin of Leather is never so cold as Wood, nor Wood as a Stone, nor a Stone as an heavy Metal; the difference proceeding from the thickness of the compaction, for verily any thing will concentrate the more cold or heat and fix it with it self, by how much the compacter and thicker body it shall be of. For it is the property of a concentrated cold to kill a thing and to make it hard and stiff. Contrarywise a concentrated heat gives a speedy life, and correction, and emendation, and this experience it self teacheth.

O happy Man is he that can make a Metalline Salt as compact and thick, and heavy as a Metal, and can by conserving it a due time in the heat of the Fire,

that the heat may by little and little and gradually be concentrated and fixed therein, make it fusile. Without doubt such an one would get a Tincture that would cure the most grievous Diseases, and change the imperfect Metals into perfect. For it is the Fire onely that begets a maturity to any thing, and by how much the stronger and greater the Fire is so much the speedier and better amending of any thing may be expected.

These things which I have here briefly declared are of greater moment, dignity, and weight than any one can believe; and besides there's no doubt but that there will shortly some step forth, who will without any fear testifie the verity of Art, by changing imperfect Metals and turning them into pure Gold; so common will Alchymy become in this Age, which was neither heard of nor seen before in this World. Nay more, Men will make this Art so familiar unto them that they will not much esteem even of particular Tinctures.

But why God permits such things to be done, is to us wholly unknown, thus much we see onely, that doubtless there will follow some great change in the World; happy shall they be who having the fear of God before their eyes, and are of a pure mind, cannot be hurt by the Devil nor Sin his Mother.

XLIV. *Wherein this secret is beneficial to those that travel in the Winter Season.*

Necessity doth sometimes enforce old Men to undertake a Journey in the Winter, which, if no urgent hast forceth, may be so ordered that at Noon and Night quiet rest may be always taken in such a place in which is plenty of Meat and Drink.

But if so be that an urgency of occasion requires a going on forward, whether one ride on Horseback, or in a Coach or Waggon, and that either the Snow render the way difficult, or some Wheel of the Waggon be by chance broken, and so the journying Person hindred from coming to the place aimed at in the appointed time, he is sometimes by this means constrained to turn aside to a poor Peasants lodging, or if his fortune be a little more favourable, he is necessitated to Inn in some poor Village, where he can neither meet with Wine or good Ale; he now that thus journieth may out of the poor Wine or Ale make himself better Wine or Ale, and the better provide for his health if he hath about him, such a magnet in some small Glass that attracteth Ice to it.

XLV. *What profit those that sail in the Sea may have by this secret.*

It may so happen that a Man taking Ship with hopes of arriving in a short space of time to the end of his Voyage, though he has some little of good Wine or Ale, may be enforced if the Wind prove contrary to stay longer upon the Sea; his good Wine therefore and his Ale being spent, he may make that small Beer in the Ship which the common Marriners drink of, better, and preserve his own health.

XLVI. *How by the help of this secret the unprofitable Phlegm of Brandy made of Corn may be taken away, that so it may become equal to the spirit that is made of the lees of Wine.*

To the effecting of this business there is required a greater Magnet, which may remove that Phlegm then needed to the Wine or Ale, because Brandy is of an hotter nature than Wine or Ale, which do more

willingly let go their wateriness than adust Wine is wont to do.

XLVII. *By what means the superfluous waterishness is to be taken away from the weaker or waterisher Vinegar, that so it may be made stronger.*

The waterishness of the weaker or more aqueous sort of Vinegar doth suffer it self to be more easily extracted by the help of that Ice-attracting Magnet, and the rather because it, *viz.* the Vinegar puts on an Icy form much sooner than any other Drinks.

XLVIII. *It may be quæried whether or no this bettering of Wine, Ale, Vinegar, Brandy, and other Drinks, and rendring them stronger and sweeter, may be done in great plenty, or whether it is to be accounted of as a curiosity onely?*

For answer, verily it is a most excellent secret most aptly satisfying the curious inquiry of mortal Men, which the World as yet never knew, and yet it can effect such unheard of things, which it is not necessary that they should be divulged.

As touching the plentifull separation of Water from Wine, Ale, or other Drinks [in great quantity] the same may be done and that with profit, and in some places bring no small gain to him who knows how rightly and artificially to accomplish the same. I have done enough as to my affairs in laying it open; we must not boil meat for the slothfull and thrust it into their mouths. Let them get it themselves if they will, and rightly take care of their own matters.

XLIX. *Whether or no likewise a great quantity of cold*

Fires out of Salts may be easily prepared.

For answer, yes, so great a quantity of them may be prepared as a Man would wish for, or as his necessity shall enforce him to desire. But because such cold Fires of Salts are the effecters of admirable and incredible things which the World never knew of, therefore the copious preparing and getting of them deserves to be concealed. Let therefore every one be content with those things which I have published in the first Century: haply in process of time more may follow.

L. *How my* Sal Mirabilis *can free watery Oils of their superfluous humidity.*

Mix one pound of this my *Sal Mirabilis* reduced by warmth into a fine Powder, with ten or twenty pounds of good Oil Olive, or new Linseed Oil; the *Sal Mirabilis* is to be commixt warm with the Oil, and being well stirred about with it, draws to it self all the Water, and settles to the bottom of the Vessel, from which the clear Oil is to be separated by pouring it off; and all the Water and impurity of the Oil is to be severed from the *Sal Mirabilis*, that so it may be recovered and be again profitable for such like operations.

LI. *The way of taking off the mustiness or stink from a Vessel corrupted or grown musty by lying, that it may be again fit to put more Wine into.*

Smear over the inside hollowness of such a Vessel with the concentrated moist Fire of Salt, that it may be every where wetted, and sprinkle thereupon so much of the *Sal Mirabilis* as will stick thereunto. For so that cold Fire of concentrated Salt, with the attracted *Sal Mirabilis* will become hard and not run,

and stick on to the Vessel; and that said Fire will in a few days space burn up all the mouldiness and stinch, just as if the common Fire of Wood had been used thereabouts. The Vessel being washed with boiling Water is again rendred fit and convenient to put Wine into.

This operation is not here taught for some stinking Vessels sake that is not worth the while, but to this end, that other secrets of greater moment, and which are profitable, may be learned thereby and known. For under these operations lie hidden many wonderfull things, and such as the greatest part of the Readers will not consider. But to what end is it to light up a Torch before such Men, that are left by God in blindness and darkness, and hath not vouchsafed to bestow on them any Eyes.

LII. *The manner of preferring all kinds of Fruits, Eggs, Onions, and other moist Fruits of the ground a long time from corrupting.*

The sweet or dulcified *Sal Mirabilis* is to be well dried by the help of the Fire, and being put in some Vessel with Fruits, Eggs or such like, with a thick and close laying [or bed of one upon the other] doth by its driness so preserve all things, and by its attracting virtue of all corrupting humidity, that for a long time they feel not the least corruption.

LIII. *Question. Why doth the* Sal Mirabilis*, which Corn has been macerated withall afore its sowing, and some whereof is mixed with the Earth, [or sown] attract the Rain, coagulate it, and hold it with it self longer than other Salts?*

For answer, this is to be imputed to its most great driness which it abounds withall.

LIV. *The preparation of the* Sal Mirabilis*, so as that it may become an universal Medicine for all Vegetables.*

The *Sal Mirabilis* as it is of it self, is by reason of its corroding virtues which it as yet retains plainly unfit for the multiplication of the Vegetables, for that being so used would prove more hurtfull than profitable. Upon this account it is necessary that to one part of it be added two parts by weight, of the best *Calx-vive*, which being moistened with Water and made up into Balls, are to be well heated red hot for an hour, that so all the corrosivity being introverted the *Sal Mirabilis* may be Alkalizated, and used to the Vegetables for an universal Medicine; for it conserves its attracting force, and loseth it not in the heating red hot.

LV. *What's the reason that Wood lying long in the Water wherein* Sal Mirabilis *is dissolved, is turned into an hard Stone?*

For answer, this operation is to be ascribed to the incredible astringent property and nature, that the *Sal Mirabilis* is endued withall.

LVI. *To reduce an half dead Tree to life again by the help of* Sal Mirabilis*, that it may revive and begin again to sprout out.*

Mix with the digged up Earth, with which the Roots of the Trees are covered, one, two, three or more pounds of the *Sal Mirabilis*, according to the bigness or littleness of the Tree, and again, cover over the Roots with the same, and pour upon the Earth it self, some Rain water, that being thereby moistned, the Roots may the better partake of the Salt that is mixed with it.

By this means, the Tree will attract to it self the Medicine or good nutriment out of the Salt, and will be cherished and refreshed just as a piece of bread or other food being given to an hunger-starv'd Man restores him his strength again.

LVIII. *How by the help of* Sal Mirabilis *most hard and insoluble subjects may be very easily dissolved.*

Let the nature and property of a Char-coal of Wood be considered, the which is such, as that if it be kept in the greatest Fire for many years, and all external air kept out from it; it will neither ever melt, nor ever lose ought of its body, but will come out again in the very same form as it had at your putting it into the Fire.

So likewise a Wood coal is able to endure an hundred, yea a thousand years in the Earth, Water, or even the most sharp corrosive Waters unhurt. This so most sharp a tryal, neither Gold nor Silver though they be the purest and most constant are able to undergo. And although a Coal be thus durable, yet nevertheless will I dissolve it in half an hours space, and convert it into a red fusile Salt, which is dissolvable with Water, and yields a wonderfull liquor which is the effecter of incredible operations both in Medicine and in Alchymy.

LIX. *What* Sal Mirabilis *is to be used to dissolve the Coles.*

The *Sal Mirabilis* is diversly prepared, as appears in the second part of *Miraculum Mundi*; but what way soever it be prepared by, it may be commodiously applied to the solution of Char-coals, nor needeth it any farther preparation, but even just so as it is taken

out of the Cucurbit and is as yet corrosive is to be used to dissolve all things.

LX. *The manner of reducing any Char-coal in half an hours space to its first matter, that is, into a sulphureous Salt, by the* Sal Mirabilis.

Melt two or three ounces of *Sal Mirabilis* in some Pot or Crucible, and throw in a peice of Wood-coal or Char-coal, and cover the Pot with its Cover, and let it flow for one half hour, that so the Salt may dissolve as much of that Coal as it can, and may leave the rest of it which it cannot dissolve, undissolved. Then pour out your matter and you shall find a red Stone of Salt, which being tasted upon the Tongue burns it like Fire, as all Alkaly Salts do. For the corrosive force is inverted by the Vegetable Sulphur, and changed into an Alkaly.

This red Carbuncle being dissolved in Water yields a green Solution, which being filtred, and let stand still for some hours, appears of a white colour, and being let alone quiet longer, acquireth a yellow colour. One drop thereof gilds over an imperial as Sulphur does, if it be therein put. For the Char-coal is no other thing but a Sulphur of the same nature as the Mineral Sulphur is of, and penetrating all the Metals, suffers it self to be fixed with them, and doth after another manner perform all those things that the Mineral Sulphur is wont to do.

The very well skilled *Sendivow* in his Dialogue concerning the Sulphur of the Wise Men, saith he is strongly guarded, and sits Captive in a dark Prison, and is not easily freed; but Salt gives him a deadly wound.

A Sulphur therefore sits in this black Coal in a dark

and obscure Prison, shut up with strong Bands, and is a Captive, nor can any one free him from those Bands but onely Salt. But being once released out of Prison, he is wont to come in view, and not before.

Thus now have we brought forth Sulphur out of his obscure Body. And now will we also bring him forth to publick view.

LXI. *How the Vegetable Sulphur is to be made visible.*

If you pour into the white Solution of the Coals some Acidity, as Vinegar, Spirit of Salt, of Vitriol, or some *Aq. Fortis*, and that leisurely and by little and little as much as is requisite for the killing of the *Sal Alkaly*; the Sulphur will settle to the bottom like a white Powder, which being separated from the Salts, and washt with fair Water, and dried, will burn and exactly answer to the virtues of the Mineral Sulphur.

LXII. *Another way demonstrating that a Mineral Sulphur lies hidden in all Vegetables.*

Put this green or white juice of the Wood or Coals expressed or squeezed out by the Salt, in a Glass Cucurbit upon some *Sal. Armoniack* powdered, put on an Alembick and draw off all the moisture by Distillation, in which Distillation the spirit of the *Sal. Armoniack* will bring over the Helm, the Vegetable Sulphur of a golden colour. It is a most penetrative Spirit and of wonderfull efficacy in Alchymy and Medicine, and this will easily be credited by him, who knows its penetrating and graduating virtue and property, in which it excels all other penetrative Spirits, you must keep it very warily because it easily vanisheth.

LXIII. *There is yet another way of making the same*

Sulphur of Coals visible.

When you have poured out our Carbuncle out of your melting Pot, beat it into Powder and mix therewith half its weight of *Sal. Armoniack* powdered, draw off by a Glass Retort, both matters exactly commixt by Distillation, that the *Sal Armoniack* may bring over with it that Sulphur. Wash off this red matter drawn out by Sublimation, with common Water, the which being freed from the *Sal. Armoniack*, is a Sulphur inclining from its reddishness to a yellow colour, and is altogether like to the Mineral Sulphur.

LXIV. *There is likewise another way of extracting the same Sulphur out of Coals.*

First of all, exactly melt the Coals by the *Sal Mirabilis* in a melting Pot, that the Salt may be accurately Alkalizated by the Coals, and burn the Tongue like Fire. Then pour it forth and beat the Coals into Powder and put them in a Glass, and pour upon them Spirit of Wine freed from all its Phlegm. Then set the Glass in warm Sand and ever and anon take it out and shake it well that the Spirit of Wine may extract the Sulphur, and leave the Salt untoucht. Your Spirit being as red as bloud, pour it out into another Glass, and again, pour on more Spirit of Wine upon the matter, and repeat the former operation; these pourings on, and cantings off are to be so often repeated, till the Spirit of Wine when poured on will extract no more. Put all these red extractions into a Glass Cucurbit, and separate the Spirit of Wine by a B. and it will leave behind in the Cucurbit a sweet Oil of the colour of bloud; a Medicine of so great moment in all Chronical Diseases, as that none is to be preferred afore it. For this Sulphur is far better than the Mineral Sulphur,

which for the most part is mixt with some Arsenical property, whereas this is extracted out of the Coals of Wood, and is therefore far purer and necessarily more conducive to Man's health.

And as touching the whole operation of this precious balsamical Sulphur, which is but little inferiour to potable Gold, the chief knack of duely making it consisteth in this, *viz.* that the *Sal Mirabilis* be well and accurately Alkalizated by the Coals. For if not, the Spirit of Wine would dissolve the *Sal Mirabilis*, and would not extract the Sulphur, nor would it answer thy wishes, if it be not deprived or despoiled of all its humidity.

He that shall be well skilled in the due handling of this Operation, will obtain a most excellent Medicine not much inferiour to potable Gold, of a sweet and pleasant Tast, and of an admirably gratefull Odour and Colour. By such a means as this, is extracted out of a dead Herb, or dead Wood, its greenness in the first Solution made by Water; and after the Extraction with Spirit of Wine, the most delicate red Colour thereof, with a most sweet vegetable Odour; all which lay hidden in the black Coal, and are again brought forth to light.

The use of this most delicate Oil of Sulphur is not small both as to the metalline Operations and other Arts; and this so speedy a putrefaction and revivification of the dead Vegetables into a living medicine carries in its Intrails a great mystery.

LXV. *It may be demanded, whether or no the Coles themselves are to be onely made use of for this revivification of the dead Vegetables, and not the green or dry Wood they are made of, and the Herbs too, may also be thus dealt with.*

For answer, even the Herb it self, or the unburnt Wood it self may be changed in a Crucible into a red Stone by the *Sal Mirabilis*. For the operation tends to the same end be it Herb or Wood, green or dry, or made into a Cole.

LXVI. *It may be queried, what Wood or what Herb being changed after that same manner by the* Sal Mirabilis*, yields the most excellent Medicine.*

For answer, the Woods that are weightiest do excel all others; for they are riper and have in them a better Sulphur, than those Woods or those Herbs have which are lighter, and grow up in half a years time, the older the Trees are, the more fit for medicine they are; such as are the Roots of Vines, Juniper, Box, Beech, Oak, Cedar, and such like.

LXVII. *A Demonstration, that out of dead Herbs and such as are again restored to life, may new Herbs be produced without the addition of the Seed of other Herbs.*

Fill some Pots with some Fertile Earth or Clay, void of all Herbs or Seeds, and moisten it with the green or white Juice of the Coals. If now you expose these to the Sun and Rain, there will spring up thencefrom divers new and unknown Herbs.

LXVIII. *How by the help of* Sal Mirabilis*, Metals are to be dissolved by the dry way, and to be converted into most excellent Medicaments, and first of Gold.*

When you would make your trial of Gold take a piece of golden Money, and bow it, and add thereunto so much *Sal Mirabilis* as may be 5, 6, or 8 times the weight of the Gold. Melt it in a Wind Furnace, and

pour it out into a Vessel fit for to receive molten Metals; and you shall find your Salt to be of a purple Colour. If all the Gold should not be dissolved but some part thereof should settle to the bottom, separate that *Regulus* from the purple Salt, and dissolve your remaining Gold in a Crucible with new *Sal Mirabilis*, that so all the Gold being dissolved may colour the Salt with a purple Colour. With this purple Salt may be performed many very profitable things, which appertain not to this place. 'Mongst which those are chiefest which respect the emendation or bettering of Metals, concerning which, I will here add onely one Operation.

LXIX. *The graduating of any Iron into Gold by this purple Salt.*

For the due performing of this, you are to have stone-like melting Pots, and the best that can be, such as by no means may drink in the Salt, or let it run through, for that the Solution of the Gold with the Salt is otherwise wont to hide it self in such Pots as are not strong enough.

If thou canst not get such, 'tis better for thee to abstain from this labour, than to lose thy Gold, unless haply thou hast a mind to try the possibility of the same.

If therefore thou desirest to encrease the *Quinta*, [or small weight] of thy Gold which thou hast added to thy Salt, with some Augmentation; put two or three *Quinta*'s of Iron bits or pieces into a good Crucible, and having put thereto your purple Salt, melt it very accurately for one half hour, in which time, the Gold will precipitate it self out of the Salt into the Iron, and graduate some of it by turning it into Gold. For whilst the purple Salt doth eat upon

the Iron and consume it, it doth together therewithall make some of it participant of a golden Nature by graduation.

I do not insert this Operation here, to the end that by the help thereof a Man should think of getting Masses of Gold, no; for the sole end of my proposing it was this, that I might confirm the possibility of the thing by ocular Demonstration.

Now as here the Iron is graduated by the help of the Gold or golden Ferment, into Gold; so likewise may Copper be graduated and exalted into pure Silver; by the application of a silvery Ferment, as followeth.

LXX. *The manner of exalting Copper into Silver.*

Dissolve Silver in a Crucible by the *Sal Mirabilis*, made of Salt-peter and Oil of Vitriol; in which Solution you shall get a green Salt, fit for the graduating of Copper into Silver, after the same manner as we taught but now of the Gold.

And albeit the Silver augmentation be not so great, yet the possibility of the Art is thence apparent and demonstrateth, that one Metal admits of being converted into another. But yet he that has good skill in handling this labour, will, if he be fraught with good and apt Crucibles, which can hold the *Sal Mirabilis* and not swallow it up, receive no small benefit by this same Operation. The *Scoria* which are remaining in this, and the precedent Operation are not to be thrown away, but to be mixed with Litharge, that so being reduced by blast, they may graduate the Lead, and enrich it with no contemptible Portion of Gold and Silver. For great are the Vertues of this Salt in graduations, which the

Ancient Philosophers have openly enough hinted at, saying that their Salt augments the redness of the Gold and whiteness of the Silver, and that this is a thing most true, he who shall in a due manner perform the Operation will learn that so it is, by his own Experience.

But least an Errour should be committed and some of your Gold and Silver lost, it is better that a Man exercise himself in making his Experiments in the lesser Metals; and omit the dealing with Gold and Silver so long till these lesser Metals make him a sufficiently experienced Master for the dealing with the greater.

LXXI. *How Iron may be exalted into Copper in the melting by the help of* Sal Mirabilis.

Dissolve one or two whole Lots of Copper in melting it by *Sal Mirabilis*, which Solution will yield thee a Salt enclining from a green, to a black colour.

Into the same Pot which contains your Copper dissolved by the *Sal Mirabilis*, put three or four Lots of bits of Iron, and adjoyn them to the Copper dissolved in the *Sal Mirabilis*, and force it with the Fire, so that they may be kept in flux together for one half hours space. By this means the dissolved Copper will adhear to the Iron by precipitation and exalt some particles of the Iron into Copper. All being well molten, pour it out into your Cone that the Copper may settle in a *Regulus*. The *Sal Mirabilis* and Iron being turned into a *Scoria*, are usefull for the inriching of Litharge, in the strong melting by blast, with Gold and Silver.

N. B. If the Mercury of Saturn be mixed with these, or else with those other *Scoria*'s which were left by

the Gold and Silver and are far better, and so be melted together with a strong Fire, the Lead will be bettered and that by an encrease not to be contemned, and will abundantly pay for the labour and costs. But yet I would not put any one upon the undertaking of this work; except he be well versed with meltings in Crucibles and without them, by the Bellows upon Hearths. For I write not these things for young Beginners, but onely for such who well know what belongs to the Art of melting.

But yet that he may have some manuduction into these labours, I will declare the general use of the *Sal Mirabilis* in the emendation of Metals.

LXXII. *The universal use of* Sal Mirabilis *in the emendation of Metals.*

Though the wonderfull Salt of Art dissolveth all Metals, and conjoyneth them in a spiritual manner as it were, and renders them efficacious to better each the other in the Fire, yet is there a difference to be observed in that thing, by him who desires to follow the nearest way, and to decline all diversions, or goings about. For example.

He that has a mind to dissolve and conjoyn the Metals, Gold, Silver, Lead, Copper, Tin, and Iron, by the *Sal Mirabilis*, that they may display their virtues in operating to the perfection of each other, must take for the Gold, Iron, Copper, and Tin, such a *Sal Mirabilis* as being prepared of common Salt doth easily dissolve those Metals. But now the same Salt used about Silver and Lead, would effect nothing as to their Solution, because there is no familiarity or friendship between common Salt, and Lune, and Lead, for it is an enemy to those Metals, kills them, and reduceth them to nothing.

N. B. But when those Metals are by the help of Salt reduced into their Mercuries, then may it come so to pass, as that they may be conjoyned with Gold, Iron, Copper, and Tin; for without a foregoing preparation, they enter not into the Salt, unless the *Lune* and *Saturn* be dissolved in that *Sal Mirabilis* which is prepared of Niter, and be adjoyned to the Solution of *Mars* and *Venus*; of which Solutions the one doth very willingly embrace the other, insomuch that one Metal doth easily operate upon the other, and consequently a profitable graduation, fixation, and emendation succeeds.

But now if you would have your Metals, not constant in the Fire, but volatile and made flying, then, that *Sal Mirabilis* is to be used, which is made of Salt Peter or Kitchin Salt, by the help of Sulphur.

This is the universal use of *Sal Mirabilis*, serving for the Solution, Graduation, Fixation, and contrariwise Volatilisation, or the conversion of all Metals into a volatile nature. But the special Solutions, Fixations, or Graduations of them by the Salt of Art, require an addition of some Vegetable Sulphur, which being adjoyned to the Metal, yields some help to the *Sal Artis* in the Graduation of a baser Metal, which help the conjunctions of Metals that be of a sulphureous nature, do not at all need; though indeed 'tis better if you help them with some Vegetable Sulphur. For Sulphur and *Sal Artis* are like Male and Female, they bear a mutual love to each other, and beget a rich Off-spring; when they lovingly court each other in the Fire, even alone and without the addition of any Metal, and are brought unto perfection. So then, thus by these operations may gain and profit be divers ways, and in divers manners gotten, as well particularly, as haply also universally, (but this last

way I am not as yet acquainted with.)

All these things do sufficiently, yea abundantly shew one the way of arriving by the help of the Salt of Art, to the attainment of such things as are of some moment. Enough to the wise.

Although that the Metals do admit of a most easie Solution by the *Sal Mirabilis* in the dry way, yet notwithstanding, that Solution may yet more commodiously be perfected the following way, *viz.* thus, when the Metals are put into the Cucurbit or Retort, in the distilling off the Spirit. For whilst the Spirit is driven off, out of those distilling Vessels, the Metal is dissolved during the Distillation, and remains in the bottom with the *Sal Mirabilis*. But whatever of the Metal remains undissolved, is to be removed; but the golden Lunar, Venerial Salt, *&c.* is to be kept for such uses as it is necessary for.

N. B. If so be any be minded to pour on again that distilled Spirit, upon the Metalline Salt abiding in the bottom he may so do, and 'tis profitable; because that Metalline Salt is by this means rendred far more commodious and apter for Transmutation.

But that none may err from the right way, it is necessary that we first shew how the Metals (out of which being bettered, Gold and Silver are to be extracted) are to be afore prepared, that so they may admit of being the more easily exalted and amended. For all things are to be done by the prescribed method, and to be managed by [promoting them to] their appointed limit and scope, if any profit is thence sought.

Lune and *Saturn* do not by any commixion associate themselves to the Metalline Salt, unless these same metals be first reduced into their

Mercuries, concerning which thing we have treated at large in the third and fourth part of the prosperity of *Germany*.

LXXIII. *By what means the imperfect Metals may (by the* Sal Mirabilis*) be turned into perfect ones.*

Take of *Sal Mirabilis* four ounces, the filings of *Venus* half an ounce. Put this matter in a strong, double, and well covered Hassiack Pot, set it in a wind Furnace, melt it strongly for half an hour, that the *Sal Mirabilis* may rightly dissolve the Copper and make it spiritual. To this Copper thus made spiritual, add half a part in weight of the Mercury of Saturn, and melt together both metals by a repeated melting, for an half or even an whole hour. In this conjunction and operation, the spiritual Copper will get to the Saturn by graduation, no small bettering and fixation. For by how much the longer they are kept in flux, so much the greater amendment doth Saturn purchase. But yet no *Regulus* can thus *per se* settle to the bottom, unless some Iron be added in the melting, concerning which, no certain weight can be prescribed. For when some small bits onely thereof, or some little particles are put in the Crucible, the Salt is mortified by corroding of the Iron, and lets fall the amended Lead which in the Cupel leaves the Gold and Silver.

This way shews you the manner of using the *Sal Mirabilis* for the amending of metals

N. B. Other metals may also be rendred spiritual by the *Sal Mirabilis*, by which not onely *Saturn* but likewise *Luna* may be graduated, or exalted to a golden degree. But yet *Saturn* is more commodious and fitter for this operation than *Luna* is. For when the *Mercury* of *Saturn* is graduated and reduced,

there needs no other labour than the separating of that *Regulus* on the Test, where the Gold and Silver is left behind in the Cupel. But if the *Lunar Mercury* be amended by graduation, and precipitated into a *Regulus*, it is first to be separated by Lead in the Cupel, and afterwards the Gold and Silver are to be separated by *Aq. Fortis*; so that there is requisite a twofold labour, which in the operation by *Saturn* is but one; and therefore it is to be preferred as to these operations before *Lune*.

N. B. All such subjects as have a graduating virtue, as *Lapis Calaminaris*, *Hematitis*, *Smiris*, *Granate*, *Talk*, &c. may be used to these labours. But however Gold is the best of all, which if so be that any one is minded to use, it behoves him to be furnished with such Pots and Crucibles, which do not drink up the Gold, and so rob you of more than the produced gain amounts to.

Thus have we demonstrated the use of the simple *Sal Mirabilis*, in the bettering of metals.

If some Sulphur be added to the *Sal Mirabilis*, it exalts the metals with a far more profitable graduation, and brings more gain than that single operation, which is instituted by the *Sal Mirabilis* simply and alone *per se*.

LXXIV. *The manner of conjoyning Gold contrary to its nature, with any burning and Volatile Vegetable Sulphur, and of amending the other Metals, all done by the help of my* Sal Mirabilis.

Every body full well knows that there is no affinity or familiarity betwixt burning Sulphur and Gold, which is a fixt Sulphur; forasmuch as they are exceedingly inimicitious to each other, and yet this enmity may

be at length changed into the greatest amity.

For 'tis usual with all such as are wont to separate molten Gold from Silver by precipitation, to use common Sulphur about that precipitation, which by its innate Antipathy thrusts out the Gold from the Silver; the same thing is likewise done in the moist way, when the same Gold is precipitated out of *Aq. Regis* or Spirit of Salt, by sulphureous Salts, such as are Crude Tartar, Salt of Tartar, Spirit of Urine, and other Alkali Salts.

These are to shew that Gold hateth and shuns Sulphur worse than any thing, as being its Capital Enemy; and yet these most bitter enemies doth the *Sal Mirabilis* easily reconcile and convert this so great an enmity into sweet friendship. This operation hiding in its Bowels great Mysteries deservedly, and by all right lies hidden to this ungratefull World, if these Mysteries could be excepted which fell into the hands of mine enemies, in my Laboratory, unwittingly to me, who without any regard had to the Writings given me by way of an Oath under their Hands, do now make merchandise of such secrets, and so basely abuse my good Will. Although the manifold use of this great Treasure hath escaped them, upon this account it hath seemed good unto me to reveal unto the whole World, those things that fell within their reach, that so it may be known to all, that such great secrets proceeded from me onely, and not from others, nor from those mine enemies themselves.

Take one *Quinta* or small weight of Gold, more or less, reduce it into thin leaves or plates, and bow them in the fashion of a Cilinder, and add thereunto six, eight or ten parts of *Sal Mirabilis*, which matters you must melt in a Crucible with an accurate and

strong fusion: When they flow, throw in some pieces of Coals into the Salt and Gold as they are melting in the Pot, that the *Sal Mirabilis* may dissolve the Gold and Coals in the melting, which usually is done in half an hour or thereabouts. The matter being poured out will shew you whether or no you have well operated for all the Gold, as likewise the *Sal Mirabilis* and Coals will be dissolved and changed into a red Stone, that bites the Tongue as if it were Fire.

This Fire and red Stone, is the golden Carbuncle of the Ancients, for it shines in the dark like a burning Coal, and produceth such wonderfull effects in Medicine and in Alchymy, which we have no mind at present to reveal. For this Gold being thus conjoyned contrary to its nature with Sulphur and Salt, is by that means unlockt, opened and prepared; as that it may by an easie business [or labour] be made spiritual, and that divers ways by divers *Menstruums*, either Acid or Urinous, and be distilled over the Helms, and the pure separated from the impure.

And albeit that I here make use of no Circumlocution and speak no plainer, yet have I spoken enough to the Wise, and have shewed them such a way to go in, as that whereby they may without labour, as 'twere arrive to the most happy and wished end, unless God for some singular causes prohibit it.

But that I may not altogether shut the door of Art upon the Son's of Art, I will teach them the making of a most excellent Medicine out of this Carbuncle.

LXXV. *The way of making a most excellent Medicine out of the Carbuncle of Gold.*

This Carbuncle is to be beaten into Powder, and the

best Spirit of Wine is to be poured thereupon, which may extract the Tincture. This tinged Liquour is to be poured off into another Glass, and more fresh Spirit is to be again poured upon the matter, that it may again extract in the heat more Tincture; these Labours you must repeat so often till all the Tincture is extracted, and the Spirit will be no more coloured. The Spirit being drawn off by distillations in a Bath leaves behind a most red Tincture in the bottom, in the form of a Liquour named *C O S*, for here are present, *Colour*, *Odour*, *Savour* or *Tast*; the Colour and Odour from the Gold, and Sulphur; the Savour from the Salt. The remainder which is left after the Extraction of the Tincture is not to be thrown away as unprofitable, but to be converted with new *Sal Mirabilis*, and Coals made of Vine wood into a red Stone, by fusion, and to be so long extracted till all the Gold be converted with the vegetable Sulphur into a Medicine. For one onely labour serves not to extract the whole Gold by the Spirit of Wine; but the oft repeated labours attain to the end proposed.

Thus hast thou friendly Reader a Medicine of great moment and of great efficacy, in which the most pure parts of the Gold and of the Vine are conjoyned, nor can they be other than a most profitable Medicament for men and metals.

LXXVI. *How by the help of this Medicament, there may be conferred on the Seeds of Vegetables, such an excellent faculty of growth, that they may be as it were seen grow, and may obtain a much nobler Nature, Colours, Savours, and Vertues, than they are wont to get out of the most stinking Dung.*

Mix with one part of fat Lome, Clay, or Earth done

into Powder, four parts of Sand, that so the fatness of the Earth may be somewhat allayed. With this mixture fill a Pot, such a one as the Gardeners are wont to keep their Flowers in; pour thereupon some Rain-water wherein is mixt [or dissolved] a little of that Medicament made of the Carbuncle, and plant or sow in that Earth some of those Herbs which abide unhurt by the Winters cold. Set the Pot with the implanted Herbs to the warm Air, but so, as that no Rain come at it, for the Rain may wash away that medicinal nutriment. When the Earth becomes dry, you must pour on more of the Medicine prepared of the Carbuncle, and that so often as need requires. So will the Herbs begin to grow, which if they meet with no other nutriment besides the Rain-water, they cannot attract any other whereby their faculty of growing may be promoted and encreased. And for as much as the Golden medicament was adjoyned to the Rainwater, the Herbs must necessarily draw it to themselves together with the Water, and obtain other properties than if they grew from the stinking Beasts Dung.

N. B. Under your Pot that contains your Herbs is to be put a Dish made of good and firm Earth, or else of some Metal, which may serve to catch the medicinal Water, that flows through the bottom of the upper Pot, or distills thence, and having received it may not drink it up but conserve it. Besides, it would not be amiss if some of that medicinal Water were put in the under Platter, which might always keep the bottom of the upper Pot moist, and so may supply the Herbs with an uncessant nutriment. It would be better also, if the Pot it self were made of some Metal and not of Earth, that so it may not drink in that precious Water, but rather conserve it.

LXXVII. *What is to be observed in this Operation, that a good effect may proceed from thence.*

In the first place, diligent heed is to be taken, that the Lome or Earth you take, partake not of any salt faculty, nor hath any other corrosive Property, for many such Earths there be which would hinder and spoil the faculty of growing.

Secondly, there must regard be had to the moistening of the Earth, lest the Seed be choked with too much humidity, or in defect of sufficient moisture, dry up and wither.

Thirdly, there must be observed a measure of the Medicament it self, that neither too much, nor too little of the same be commixt with the Rain-water. For an overmuch quantity thereof burns up the Seed, and a more sparing Portion cannot yield nutriment enough to the Herbs.

Farther, some Musk or other things that emit a fragrant Odour may be therewith mixed, which addition is wont to get to the Herbs a most fragrant Odour. If so be a man fears to apply the aforesaid precious Medicament to this Operation, because of the Costs of the same, he may use that Tincture which we taught a little afore, to prepare of Coles onely without Gold; and which indeed will perform all those things, (as in reference to the growing faculty) which that Golden medicament is wont to perform; this onely excepted, *viz.* that the Herbs will nor partake of that golden Property which they obtain by that Golden medicament.

The things we have here written and published concerning the promoting the faculty of growth in golden Herbs, though they seem not of any great moment, yet hide they under them mysteries of great

moment, the which many Artists will apprehend, and convert unto their Use.

LXXVIII. *How any Wood or any Wood-coal may be so prepared by the* Sal Mirabilis*, as to be capable of a long while resisting the Fire.*

Dissolve some *Sal Mirabilis* in common Water, put some Wood or Wood coal therein, let it lye in it for some days, or so long till it be well glutted with the Liquor and become ponderous. Then take it out and dry it very well at the fire, that all the moisture vanishing away may leave the *Sal Mirabilis* in the Wood: Then put it in the said Solution yet again, and take it out and again dry it, which labour will render the Wood so much the solider by how much the oftener it shall be repeated. By this means, all the Pores will be filled with the Salt and the Air will be shut out, that it can penetrate it no more; without which Air no Wood can ever take fire or burn. If now you put such Wood or such Coals with other Wood and Coals in the fire, these [un-imbibed Coals, *&c.*] will be consumed by the Fire in a short time and be reduced into Ashes, but those others will remain untoucht, and may be taken out unhurt, though indeed even they too will be burnt if they lye over long in the Fire. This is certain concerning Coals, that those that are made of more weighty Wood, and which abound with a greater Quantity of Salt, such as are the Oak, Beech, Juniper, Vines, and other Trees whose Wood is ponderous dure far longer in the fire than those Coals do which are made of Firr, Pine, Alder, Willows, and such like lighter Trees, and which have a lesser Quantity of Salt, and this now I do not mention barely for fashions sake, but to this intent, that occasion may be given from this kind of knowledge of drawing some profitable matter

therefrom; as for Example.

LXXIX. *How such kind of Woods which are always so near the Fire, as that they are still in danger of being burnt, and thereby threaten damage may be conserved from firing.*

Dissolve some *Sal Mirabilis* in Water, and with a Pencil smear over such Wood which by reason of its nearness to the Fire is always in danger of being burnt. When the Water is dryed up, moisten it again with the same Water, and repeat this moistening so often, till it hath drunk in a sufficient Quantity of the *Sal Mirabilis*, and become able to resist the heat. By this means might men be often freed of many fears and cares, in ships dawb'd with pitch and in other places, where by reason of the too nearness of dry Timber there is danger of firing.

LXXX. *How by the help of* Sal Mirabilis *any Wood may be conserved so, as for a long time to remain unhurt in the Water.*

He that desires to preserve Wood, that it may not be detrimented by the Water nor rot in a long time, may be master of his wishes, the following way. Dry your wood very well, and being dry moisten it with strong Oil of Vitriol very exactly, and being moistened sprinkle it with the *Sal Mirabilis* beaten into Powder, that it may stick well on to the Oil of the Vitriol. For the Oil of Vitriol doth in its penetrating of the wood carry in the Salt thereinto, and makes in the outside thereof every where about a black Crust, just as if that wood had been burnt by the Fire. Now because Coals resist putrefaction, it must necessarily follow that the wood being in that wise ordered must remain a long time unhurt in the water.

LXXXI. *The Preparation of the* Sal Mirabilis *for this Work.*

There ariseth no small difference amongst the Salts themselves from the different way used in making the *Sal Mirabilis*.

If the Oil of Vitriol wherewithal this *Sal Mirabilis* is prepared, be not by reason of the superfluous humidity strong enough, any one may easily conjecture that a good *Sal Mirabilis* cannot be made thereof, because the Kitchin Salt would receive therefrom but little alteration. To prevent this inconvenience therefore, you are to take equal weights of Salt and Oil, that so one may be assured that the common Salt is well inverted, and made a good *Sal Mirabilis*.

LXXXII. *By what means trial may be made, if the* Sal Mirabilis *be duely prepared, and how it may be fitted for this and other Uses.*

Its Colour ought to be white and transparent; its figure is in long *Stria*'s or Chrystals; its tast is like Ice melting upon the Tongue and yields some bitterishness. Being dryed in the Fire and all the moisture gone off, it will loose three parts of its own Body, and retain a fourth Part onely; being dissolved in Water it will recover those three Parts again.

But on the contrary, if it shoot into a square Figure, and hath as yet a saltish tast, and being dryed loseth but little of its weight; it is not worth a rush. and shews that either the Oil of Vitriol it self was not good, or that there was not enough used to the Operation. These things we would not bury in silence, that so we might well advise young beginners, and withdraw them from their Errours.

LXXXIII. *It may be queried, whether the* Sal Mirabilis *serves for the use of Artificers and Craftsmen.*

For answer, yes. For this *Sal Mirabilis* is not onely able to perform things of great moment, and those too, such as are not common; both in Alchimy and in Medicine; (a rehearsal of which, we shall for brevities sake omit) but withall it may be used in other Arts and Handycrafts with great admiration and profit; and this we cannot neither at this time demonstrate because of the but now mentioned brevities sake. We will onely shew here, that even the poorest Husbandman, might (if they knew its preparation use it to notable advantage and profit.

LXXXIV. *How every Countreyman may encrease any kind of Corn or Seed with a thousand fold encrease, by the* Sal Mirabilis *if he can get it.*

We have aforetold you, that the *Sal Mirabilis* being so, as it is *per se*, is plainly unapt for the multiplication of the Vegetables, unless that corrosive Faculty be taken therefrom by lime or other *Alkali* Salts, [the which must be done] if you would expect therefrom any good concerning this multiplication. Here now will I disclose a business of no small moment; yet not to this end as if I would perswade the Countreymen, to get for the future, or afford to their Corn so plentifull a faculty of encreasing. No, no, I well know that they know not how to make the *Sal Mirabilis*, and if they did, yet would they not depart a Nails breadth from their Ancient Custom. For 'tis a common Proverb, Old Dogs are very difficultly tamed; and this, the common Course of mens Lives doth clearly teach; wherein you'l find, that a man hardly unlearns that in his old Age which he learned

in his Youth; so that an Old man doth very difficultly suffer himself to be withdrawn from those things whereto he hath been accustomed when young. Neither is it my purpose so to do, for as much as I insert the things here mentioned by me, for this end onely, *viz.* that the possibility and wonderous Properties of the *Sal Mirabilis* may be brought out of Darkness unto Light, and may be made evident to the whole World.

I would likewise be thus understood as touching other Workmen, for whom these things are not delivered or treated of, that they should desist from their old Custom, and obey my admonitions and instructions; but for this end it is onely that I publish these things, *viz.* that they every one may know that my *Sal Mirabilis* can be an helper to men of all ranks, and also may bring even to the Craftsmen themselves and to the poorest Husbandmen, great fruit and benefit.

Now when you hear it mentioned that some Grain of Corn is augmentable beyond the usual Custom, by an unheard of multiplication, it must of necessity be, that it emit more than one, two, or three Stalks, for as much as so few Stalks, cannot yield so great an Encrease. But now if one Grain is to put forth so many Stalks, it is wholly necessary that it be done by some certain singular and strong efficacy of expulsion; and that too, even presently and at the beginning when the grain is at first sown in the earth. For whatsoever is not here done even at the beginning, will never be done afterwards.

For all the stalks that spring forth after are small, and quite unfit to bring forth Corn. So then, seeing that many stalks are to break out at one and the same time out of one grain, if an eminent

multiplication is expected to follow, then verily 'tis even necessary that some help be administred to that same grain afore it be put in the earth, that so it may plentifully grow and be speedy, in presently sending forth even at the very beginning, good store of stalks.

The Countreymen know not any thing serving to such an operation but onely Dung; but I do even now again say as I have often done afore, that this effect of the usual and common multiplication ariseth not from the Dung it self, (as being but the outside Husk) but from that sulphureous Salt that lies hidden in the Dung. Hence it is, that by how much the purer and better the Salt is so much the speedier and more efficacious an operation ariseth therefrom. If then, that such a Salt can be made by Art, which performs the same that Dung does, it altogether follows that we are able to do the same without Dung, and that far better than by Dung, in which the salt is so much dilated, and which (by the benefit of Art,) we contract into a narrow compass.

I hope the well minded Reader will not be displeased that I use so many words here, about the stinking Dung of Animals, because I can't indeed use in this place any other manner of speaking, seeing I intended the laying open of this thing, and therefore am I even compelled to speak of the same: For he that minds the publication of any thing, cannot do it, unless he speaks of the same. And although that Dung may seem to some finical Men a very contemptible thing, yet notwithstanding it is the onely and principal *Medium*, by the help whereby our daily Bread and the necessary sustaining of our Bodies is had. But as for the stinking Dung of Animals, I even remit it to the Dunghill, and return to my *Sal Mirabilis*.

LXXXV. *Whether or no a thousandfold encrease may be had of Corn by the* Sal Mirabilis.

Melt one or two pounds of *Sal Mirabilis* in a Crucible, then throw in some Coals and dissolve them, and reduce them by Solution into a red and fiery Stone; which matter being compounded by melting of them both, beat into Powder and pour thereupon common Spirit of Wine, that it may wax red by extracting out the Tincture. Pour this out into another Vessel, and pour on other Spirit upon the aforesaid matter. And this pouring on and canting off, is to be repeated so often till all the redness is extracted. By this extraction you shall get a sulphureous Salt, fit to steep or macerate Corn withall; because it agrees very well to the properties of that Salt which sticks hidden in the Dung of Beasts: Now I use Spirit of Wine to the extraction for this cause, for that it hastens the germination or budding of the Seeds even as well as the Salt doth, and enricheth it with an emission of many Stalks. But yet your Spirit of Wine must not be over strong, for then it would hinder the faculty of growing, the which thing even the Salt will also do if too great a quantity thereof be added to the weaker Spirit of Wine, because it would by burning up the Seed, be an impediment to the faculty of the Seeds growth. It is therefore necessary that a good regard be had (in those operations) to a due measure. For an overmuch access of any thing is wont to be no less hurtfull than a defect or clearly wanting of the same.

This is the preparation of the *Sal Mirabilis*, necessary for the macerating of Corn, that so it may produce many Stalks; now follows the true and genuine use thereof in macerating of the same.

LXXXVI. *The true and right way of macerating Corn in the* Sal Mirabilis.

There are several kinds of Corn, and of these various and different sorts. Hence is it, that one Seed is longer a macerating than another is; and that because one becomes soft sooner than doth another, or attracts humidities to it self quicker than another, so that regard is to be well had to the difference thereof. Rye and Wheat are encompassed with thin Skins, and therefore are the sooner macerated, Oats require a longer time, and so doth Barley which has a yet harder Husk than the Oats hath, and therefore requires a longer time for its maceration. But as touching these things, every one may find them out by his own understanding and often experience, because it is impossible to mention all things so clearly and perspicuously. But this is a general rule, your Corn is to be so long left in steep, untill you may easily bite it a pieces, for you must beware of softning it too much, for then it would presently putrifie, and by that its putrefaction corrupt and spoil all the growing faculty. But experience will instruct you far more commodiously and more perfectly herein, than a larger description can.

LXXXVII. *The true and right way of sowing your macerated Corn in the Earth.*

Any one may easily conjecture that if the Corn macerated by the aforegoing way, be sown in the Fields the usual way and so thick as the Husbandmen are wont to do, it will not succeed because of the overmuch thronging and thickness by which the Corn would hinder each other and so choak themselves. This incommodity therefore is to be prevented, and such macerated Grain to be thinly

sown in the Fields that they may have room for the freeness of Air, and so may grow up and not spoil each other by a mutual suffocation.

Nay rather that the more accurate diligence may be had or used about this sowing, a Man may make him some wooden Instrument, whereby together and at once many grains of Corn may be sown in the earth in good order and at a certain distance; concerning which labour I have purposed to speak more at large in another place. For so no grain will unprofitably perish, and with one Sack of Corn may be sown more Ground than six, eight or ten Sacks are wont to do otherwise; my too short time constrains me to break off my discourse concerning these things.

LXXXVIII. *By what means the* Sal Mirabilis *may bring profit to the Dressers of Vines.*

If there could be a good quantity had of *Sal Mirabilis*, and that without great costs, 'tis without doubt but the Vines might be made very fruitfull therewithall.

But because they are ignorant of the preparation thereof, who dress Vines; 'tis expedient for them to acquiesce in their Beasts Dung, or make use of that onely for the fattening and dunging of their Vines, which is made of common or Kitchin Salt by inverting and Alkalizating it by *Calx-vive*. Unless a man has Vines about his House or in his Garden, and would make them fruitfuller than ordinary. For to make tryal thereof in great Vineyards would be too costly.

But yet I will propound another way to the Vine dressers, by the help whereof they may get plenty of Wine every year. I have at large taught in my

foregoing Writings, and that by various descriptions, by what means one may be Master of noble and ripe Wines every year, yea even in those times, in which by reason of the coldness and unseasonableness of the Air, and the want of the Solar-beams, the Grapes cannot attain their due maturity: and withall, how in those places where they seldom or never grow ripe, [they may be ripened] by concentration by the help of the Fire, or else by fermentation with their own vinous spirit distilled out of the Lees, and added to the said Wine; [having I say already taught this] there's no need of repeating it again. Yet nevertheless if God lengthen my life out so long, I have purposed to write a peculiar Book of the propagating and bettering of Wines.

But that I may ingratiate my self with those who not much caring for poor thin Wines, desire to have some noble Wine in their Cellars, I will here reveal a certain secret which may not onely refresh the body and spirit of many thousands of Men, high and low, rich and poor, throughout all *Germany*, yea and all *Europe* too; but also administer them no small profit.

I have taught a little afore, how by the help of the *Sal Mirabilis*, and of the concentrated and cold Fire of Salts, a Man may make his Guests different Wines out of one Cup, and therewithall refresh them; and I have likewise shewed, that such a bettering of Wine may be exercised in most places, with notable profit.

The truth of which thing, it hath seemed good unto me to demonstrate divers ways, for the sake of my Neighbour.

I have frequently laid open in my Writings some excellent secrets, and have withall made a discovery of the most great benefit which one may thereby receive.

But because I have not pointed out with my Fingers where and whence such notable profit is to be gotten, the most part could not apprehend or find the same, and have therefore rejected the thing it self being it was not so perspicuously and clearly laid open, as unprofitable and worth nothing. And now least it thus happen to this secret, if I should not shew and point as it were with my Fingers, the benefit thereof, and if therefore such secrets lying in the dark should not come forth to the profit and use of mankind, (which would be a grievous thing and to be lamented, if it should not,) it hath seemed good unto me to manifest the utilities of the same.

LXXXIX. *By what means notable profit may be gotten by my Water-attracting Magnet.*

First of all, it is no small benefit when the overmuch Water is taken away from the poorer sort of Wines, with which *Germany* doth every where almost abound, and the Wines made nobler, stronger, more efficacious, and more durable, and do get a far more acceptable savour.

For the unripe and watery Wines are not of any long lasting, but do in a while lose all their savour and all their strength, and become mouldy, and corrupt with lying, and 'tis not seldom that they grow tenacious, or ropy, thick and muddy, reddish and filthy: all which incommodities doth my Magnet cure in the space of one onely hour, by the drawing away the overmuch waterishness.

XC. *The second benefit.*

If the plentifull Vintage or large encrease of the Wine should be more than you have Barrels to fill, nothing can be more acceptable than that the Wine may be

concentrated by the Magnet, (which draws to it self the Water and turns it into Ice) by extracting the overmuchness of the Water, that so by this means the more contracted Wines may be laid up the more commodiously, and may if not very good, be rendred better.

XCI. *The third benefit, and which is most acceptable to all Masters of Families.*

If so be that the Master of the House had a whole Cellar full of Wine, and every Vessel filled with the like or self same noble Wine, without any difference; then verily the Master and Servant would be of equal degree, nor should the Master have any prerogative above the Servant. But now using the help of the said Magnet, he may have his Wines bettered as he pleaseth, and have divers Wines in his Cellar, as we taught a little above; if, *viz.* he shall draw from it the unprofitable watery part.

XCII. *Another way of getting profit by the Magnet's drawing the Water out of Wines.*

The Anatomizing and examen of Wine discovers, that in twelve measures thereof, there is about one of more noble spirit, and almost one measure of Tartar. The residue are nought else but an insipid water altogether like to common water. Now when the Wines are to be transported out of the Countries wherein they grow, into more remote places, what need is there of carrying the water with it so long a Journey? would it not be better to separate some part thereof from the Wine, and so transport the Wine, and let the water alone, and thereby shun a great deal of charges disburst for the carriage of water into such places as have enough already?

would there not redound a great benefit hereby, both to the Buyers and Sellers of Wines? yea verily, I believe that there will not onely redound unto them a great conveniency, but withall a great deal of Treasure.

XCIII. *There's yet another way of getting notable profit by the said Magnet,* viz. *if the ill tast and fetidness be taken away from the Brandy; usually made of Corn.*

There is some mention made in what went afore concerning this amending; but 'tis not done so clearly and manifestly. I will therefore open it more clearly and more perspicuously in this place.

Mix one part of your Brandy made of Corn, with two parts of common water poured thereunto, that the stench and ungratefull savour may diffuse it self into the added water. Having so done, you must again free this Brandy thus tempered with water by putting your Magnet thereinto, and so will you draw therefrom all the stinkingness, and 'tis just as if you had washed that Wine, and rinsed off all its filth.

XCIV. *The benefit purchased by separating the Water from Vinegar.*

If you would have benefit by this liquor, the same may be done by the same reason; in those places out of which it is transported into other Countries; if, *viz.* the unprofitable water be removed after the same manner as we taught to be separated from the Wine.

XCV. *By what means good Wine and Vinegar may be every year prepared by the help of this same Magnet, in those Countries in which the Grapes do not ripen.*

Although that in all the Coasts scituated upon the Rhine, as in *Rhingovia*, *Moguntia*, *Wormatia*, *Algentorati*; in *Alsatia*, the *Palatinate*, *Franconia*, *Austria*, and the Dukedom of *Wurtenberg*, (in which places, the Wines do for the most part arrive to their perfection every year) this Art be not so very necessary; yet nevertheless *Saxonia*, *Misnia*, *Thuringia*, *Suevia*, and *Bavaria* do stand in need thereof; in which Countries the Wine doth for the most part remain acid, unless the Summer hath by a singular chance hapned to be very hot. For in these places it is no less profitable than pleasant to drink a sweeter and nobler Wine instead of the more acid Wine, if so be one could get it by the help of the said Art. Besides, this same Art yields no small profit and benefit in those Countries, in which though the Wine is (as we said but now) wont to be noble. For it may happen that some unseasonable Weather may hinder the ripening of the Grapes, and that the Vineyards wanting the due heat of the Sun cannot arrive unto maturity. For oftentimes in one and the same Countrey, there are divers Wines produced, so that one sort exceeds another in nobility and goodness. Those therefore that are good and generous need not the help of this Art, but contrarily the smaller and less noble Wines want it. Hence I conclude that in all the Countries of the World, wheresoever Wines are made, this Art may be serviceable and profitable to any one.

XCVI. *How in those cold Countries; as in* Poland*,* Denmark*,* Suedeland*,* Norway*, &c. Which by reason of the Coldness of the Air admit not of making Wine, there may nevertheless good Wine and Vinegar conducive to the health of Man be made.*

Though the Cold may so hinder as that Vines will not grow, nor Vineyards be, yet notwithstanding those places so obnoxious to the Cold, have plenty of Apples, Pears, and such like Tree-fruits; whose Juice being pressed out, and fermented, and after the Fermentation, freed of the greatest part of the unprofitable water, will give a better and more durable Drink, than that which is made the usual way of Apples and Pears. For this drink cannot last long because of the muchness of the humidity, but becomes ropy, acid and muddy, and so corrupts.

So likewise may those Countries that abound with Corn be rendered partakers of most excellent and wine-like Drink, which may be used and drunk instead of Wine, to the great benefit and advancement of the health of the Body; and it is to be thus done.

First of all, let very good Wheat be made to germinate [or sprout] by stewing in some gentle heat; [as in making of Mault] then after the sprouting let it be put in some warm Furnace, or in great Coppers, and stirred about with some wooden thing without ceasing till it be dryed. In this Operation you must have an especial care, that the Corn smatch not of the Fire, which is then brought by drying to a sufficient hardness, when it is not soft in biting it with your Teeth, but leaps as 'twere in pieces; this is a sign that you have done your work well. Having prepared it thus, let it be broken [or ground] and boiled after the manner of other Ale, without Hops; and then after it has fermented let it be freed from its superfluous moisture by our Magnet. So will you have remaining a sweet Drink not much unlike to Wine; which Liquor if you would yet have more near in its likeness to Wine, you must

put in for every Tun or every Butt about a pound of Tartar in the Fermentation, that so it may ferment together with the Corn, and may give unto this Drink a winy Tast.

After the same manner may excellent Metheglin be made of Honey and Sugar, or such a kind of Drink as but little differs from the Savour of Wine. An Art, verily, most profitable in those places which have no Wine, but have that defect supplied by the great Quantity of Honey and Sugar. The manner of making such a kind of Drink is this.

Let there be added to the Honey so much water as is sufficient, for their boiling together in a Copper, and let them being boiled be diligently scummed so long till the Honey becomes thick again, and gets a duskish or a reddish Colour, which is a sign, that the less sweet, and less honied Savour is removed away, by the boiling.

To this Honey reduced to the said thickness, let be again added as much water as is sufficient, that they may be boiled together, and being boiled put up in Barrels. Whilst it is yet warm some Ale yest must be added, which being fermented, renders this Liquor so sweet that it is but little inferiour to Wine; moreover it will come nearer to the Tast of Wine, if a due part of dissolved Tartar shall be added thereunto in the Fermentation, that so being fermented together herewith, it may acquire to it self a winy Tast.

N. B. But here good heed must be had, that in the last Solution there be not taken too little water, but rather more than is wont to be taken in the making of common Mede. The reason is this; because the Honey gets not its due fermentation, but retains its usual and a kind of nauceous Sweetness, and cannot be made partaker of a winy Savour.

But now, water enough being added, promotes the Fermentation, and causeth that it gets its Purity and Clarity much sooner, and is of an excellent sweet Savour. After that this Metheglin hath gotten the requisite Clarity, the superfluous water is to be abstracted thencefrom by your Magnet, which water being removed, the remaining ungratefull Savour of the Honey going away together with the water, vanisheth, and this Wine of the Honey, gets its strong Spirits from the Honey, and has a winy Savour from the Tartar. If any one be so minded, he may add to the Honey in the first boiling, some Spices, or which is better, may hang them in a little Bag in at the Bung, that so they may be fermented with the Metheglin, and give it a sweet Savour. The Spices are these that follow: Cardamoms one, Coriander two, Orris Roots three parts; the which will give the Metheglin a fine Tast. The Flowers of Elder make it tast just like Wine made of the Apian or Muscadel Grapes. Cinamon and Cloves also do give it a delicate Sweetness. But every one may use such Spices as he thinks best, according as he fancieth this or that Tast. Of such Metheglin is made most excellent Vinegar, which scarce is inferiour to wine Vinegar though of the very best Sort.

XCVII. *Whither or no, there be any other benefit, which our Magnet can bestow.*

He that shall onely diligently enquire by trials made, will without doubt, find, that such a Magnet as attracteth water, can be profitable many ways; which to treat largely of here, the time will not permit. For because that this Magnet draws out of all Liquors, their superfluous water, it doth certainly bring much Benefit, and manifold Fruits, very many of which, we would here declare if need required. But the time

admits not of any longer dwelling about these things. But yet, however, I will reveal an Art for the Poor's sake who have no Wine growing, nor any money to buy it, and are therefore enforced (but especially in the winter Season) to drink cold water after their hard Labours;) by the help of which said Art they may have good Wine to drink all the year both in the Summer and Winter months; I mean in those places in which theres plenty of Wine made, and is in the Autumn Season squeezed out with wine Presses.

In all those places in which store of Grapes are prest out with Presses, there is great store of the husks, the which is partly kept for the Beasts to nourish them in the Winter, and partly thrown away as unprofitable, especially in those Seasons which afford a great Quantity of Wine. But if so be that the Wine Harvest be somewhat poor and not so plentifull, then they pour water upon all the husks or on some part of them, and leave it so for some days, and again press them; and thereby is made a Drink that has some kind of wine-like Savour which is given to the Servants, and other Labourers to drink instead of bare water.

But now in such Years wherein they are thoroughly busied in curing or making much Wine, they have not the time to bestow about making that Drink then. Nay sometimes they have such a deal of Wine that they have not Cask to put it in, but are compelled to give away their smaller Wines to others, and stuff their Cellars with the more noble.

If therefore the poorer sort would have now and then a good Draught of Wine, they must get them some large Vessels which they must fill with the Offal of the Grapes, and with water poured thereupon, and leave them thus, so long untill the

rich People have done with their wine Presses and stowed their Wines in their Cellars. Then may they also press out their second Wines in the rich mens wine Presses, and by the oft-spoken of Magnet separate the unprofitable water therefrom, and so lay up their Wine, the which will last and abide good and durable all the Year about, which it will not otherwise do. For such kind of second Wines dure only (for the most part) but the Winter and Spring, and part of the Summer, and the utmost time they remain any thing good is but till the Month of *July*, afterwards they grow ropy or musty. But now the unprofitable part of the water being separated, they get a shorter or longer durability according to the moreness or lesness of their Concentration. This advice and secret was I willing to bestow upon the poor that they may also drink good Wine.

But they may demand where should we get us such a Magnet, by the using of which we might make our second Wines good? I answer, they may borrow it of the Rich men who have Vineyards, for so long; and when they have done with it may restore it them again; for it is so lasting that it never loseth any thing of its Body nor of its Virtue, but always remains good. The rich men therefore will buy it of the Chymists, the preparation whereof is clearly and perspicuously delivered in my first Century. If now this be done (which I doubt not of) the Chymist by preparing, and the Merchant by using of the same will reap no small Benefit and profit. And questionless, there will be found some men that are studious of new things, who will make trial of this Concentration of Wines in small experiments; that so they may fish out the possibility of the thing. But I know not whether they will exercise this Operation in a greater Quantity or no. For its neither here nor

there to me whether they will exercise this Art or let it alone. For this is the natural disposition of most men, they would very willingly get store of gain, provided it could be done without great labour and much trouble. From hence it is certain, that this Art of Concentrating Wines by cold Fires will not be so soon common, especially because I have not here delivered how such a Magnet may be made in great Quantity, and applied to use.

But yet I think I have sufficiently done [or hinted at] those things I have revealed. Let others draw out of their own store too, if they have any thing. More things I could not reveal, for many weighty causes which I count it needless to mention here. Very many men will commit many Errours, e're they attain the right Scope. Verily it would be much better if there were a greater Number of such Persons as readily understood this Art; especially in those places of *Germany* in which the Wines are so acid, that it will make ones Eyes run with water if a bigger Draught than ordinary be drunk to quench Thirst. And therefore in those places Ale is in the most esteem, and indeed it is no contemptible drink, if good, but yet it is not at all comparable to the noble Wine, concerning which noble Liquor these Verses may rightly be pronounced.

With what a lovely gift are all things blest
By th' noble Wine from tender Vines exprest,
To sick mens pains it doth an easement bring,
It joys the Countrey Peasant, makes him sing.

And you shall see that that man whom to day
By means of Wine lies tumbling in the way,
Will on the Morrow have his t'other lay.

There are many Songs in the praise of Wine, but Ale is not celebrated with any ditty, though it be never so good. Upon this account therefore the noble Juice of Wine is not undeservedly preferred before all the rest, provided it has its due generousness and excelling goodness. But if it be not good, 'tis wholly expedient to help it, lest by keeping its Sourishness and waterishness it perish. But filthy covetousness bears too great a sway upon mortals, insomuch that there are too many to be found that would rather pour water to their Wine and spoil it, than better it by abstracting of the water.

I have often heard the complaints of Vineyard Masters in those Seasons, in which they have had whole Cellars full of small and poor Wines, which have not arrived to so much ripeness as to be able to be sold and transported into other Countries. Hence comes it to pass, that if they lie a long while and be not drunk up, they degenerate more and more, and become exceeding poor, and at length corrupt by lying and so perish for altogether; unless it happens by chance that some years of a more happy Vintage do succeed, with which more noble Wines they may mix their small ones, and so sell them off, but yet

with a poor profit, because the Merchants are not wont to buy midling Wines, but the very best of all. But they may have noble Wine every year by that means that I have shewn. For if one eighth part of water were extracted from the Wine, it might have the name of good Wine. But now if a fourth part of that water should be taken away thencefrom it would become far more excellent, for a little water is able to make a most noble Wine smaller and more base, a tryal whereof you may make as follows.

A Hogshead of rich Wine, containing some six Renish *Oma*'s or *Aulms*, costs an hundred imperials; yea [sometimes] more, an hundred Duckets; Now if you take thencefrom one eighth part of the measure, and put in the room thereof one eighth part of water, you will find by the tast, that its goodness is so much diminished, that that Vessel will be scarcely valued at fifty imperials. But if a quarter part be taken away, and so much water put in its room, any one may easily conjecture that such a Vessel filled with such Wine will be hardly judged worth twenty imperials.

So then by this way that I have told, any Wine might be brought to such a nobleness by taking away one fourth part onely of its water, that a Vessel which afore would have yielded but twelve imperials, will afterwards yield three times the price.

By all this that hath been spoken may any one easily conclude the truth of the true Alchymy, and what incredible benefits may be reaped thencefrom. From this ground I say, that that delicate sup of Wine which I have here taught the preparation of will so inflame many, even of the enemies of Alchymy, that they will for the future put their hands to the Coals, and try to get thereby such a delicate Magnet, and to have it by them.

This Magnet will also help not a few Alchymists themselves that are in straights and want, and afford them a good Cup of Wine; whose Vineyards, House, and all their substance, the smoak and hot fire hath already driven up the Chimny, and [in lieu thereof] this cold fire will recover them again with no contemptible increase. For this Leap-year 1660 is the first year since the World's Creation, in which the miserable Coal-blowers may arrive to a way of getting their Bread, if they will but stretch out their hands. And that I may be here well understood, I don't onely mind the concentration of Wine, for there are other most profitable uses to be found out of these cold fires; which time will manifest.

It seems good unto me to add by way of an overplus (because I have taught the making of a Cup of good Wine, and there is a great familiarity 'twixt Wine and Corn,) the showing away how one may get a most delicate sort of Bread and of an excellent savour, that so he may be furnished with the choicest of Food and Drink.

Let some part of the water be extracted by the cold Magnet out of new Milk, that it may be made better than the common Milk. This would be a most excellent nutriment for the sustaining of Infants, whose Mothers die too soon. For every Infant cannot bear raw Cows Milk; and if the superfluity of the Water be removed by boiling, the Milk (not brooking much boiling) doth easily tast of the fire, which would not be if it were freed of its water by the oft mentioned Magnet, for it would remain sweet, and be of an excellent Tast. With this fat Milk, moisten your Wheat Meal, (which must be of the best) in the stead of water; and let the Bread be baked, and without doubt the Bread will be of an excellent Tast,

which could not be by the common baking, although that Butter were added thereunto. One may feed upon this Bread alone, without Cheese and Butter, because the Cheese and the Butter are with the Milk in which they lie hidden, added unto the Bread. Such Bread is strong nourishment and far better for filling and nourishing than the common; and in eating thereof one may easily commit excess, because it notably pleaseth the Pallat by the sweetness of its tast. For so it happened on a time to me, for eating such Bread as was made up with fat Sheeps Milk I exceeded a mediocrity in my eating. But verily this is wont to happen to such as in their eating and drinking, abuse the delicate Meats and Drinks, and so fall into the hands of the Physicians, because indeed the most Diseases do arise from too much fulness and surfeiting. And therefore good reason is it that a most special regard be had to a mediocrity and temperance in all things.

XCVIII. *How the Water attracting Magnet may be serviceable to Physicians.*

In my opinion a Physician may very well examine the Urine of the Sick, and Anotamize the same, and that more easily than by an external bare aspect or looking-on onely, if, *viz.* he separate and take away therefrom a part of the water by the Magnet. For by this means he will discern a great difference betwixt the one and the other part, and know the causes and properties of Diseases; and that far better and more certainly than by a bare outside view, after the Gallenical fashion, or by the weight, and by Distillation according to the custom of *Paracelsus* and *Turnheiser*; But I leave it to every ones pleasure to enquire which of these three ways is to be preferred.

And now follows by way of Corrolary or Surplusage, a description of certain most excellent Medicines to be administred, for the curing of most greivous Diseases both in Men and Beasts.

XCIX. *The Cure of the Stone in the Reins and Bladder, and likewise of the Gout.*

The Stone of the Reins and Bladder, and the Gout, are judged to be the most greivous Diseases, and in very deed they are most grievous Sicknesses, but especially the Gout, which being various and manifold afflicts the Body of Man with most grievous Pains. Now for the cure and removal of these Diseases, I will prescribe a certain and safe Medicament, easily preparable, and of small charge.

Take one or two pounds of white Tartar, and pour upon every pound beaten into Powder about some eight or ten pound of common water, which set over the Coals in a well glazed earthen Pot, and boil it so long, till all the Tartar shall be dissolved by the water, which you may try if done or no with a clean wooden Spoon, putting it to the bottom and seeing if there be any left undissolved. In the boiling you must very diligently take off the Scum with a wooden Scummer, that so there may remain no impurity. After that all the Tartar is dissolved and that there appears no more Scum, evaporate the water so long till a thin skin appears at the top. Then take off the Pot from the Coals, and set it in some cold place, and leave it there unstirred for a day, and there will stick on to the sides of the Pot, delicate Crystals like a Dye, having a Cubical form *Paracelsus* calls this mundified Tartar *Ludus*, and that very properly, and without doubt he did so, because it gets (after its purification the shape of the square Dice. Out of this

pure and Cube-like Tartar is prepared an universal Medicine against all tartarous Diseases, as follows.

If you have one pound of this pure and Cubical Tartar, reduce one pound of Crude Tartar into a white Salt by Calcination; the which you are to dissolve with so much common water as is necessary to its dissolution; filter the dissolved Salt through Cap-Paper, that you may have your sharp *Lixivium* freed of all its Fæces. Pour this *Lixivium* into the glazed Pot wherein your pound of the said purified Tartar is, and boil it accurately therewithall; in which boiling the Tartar will be easily dissolved by the *Lixivium*, and be turned with the same into a ruddish coloured juice; though that your *Lixivium* and Tartar had each of them a white and clear colour. The reason is this, because the Tartar is as yet defiled with many hidden and black Fæces, and doth at length after its solution with the *Lixivium* render them visible and manifest. Pass this muddish solution through a filter, and it will be a yellow liquor, and leave many Fæces in the Philter, good for nothing but to be thrown away, for they are of no virtue more. Verily 'tis a thing worth the admiring, that there should yet be so many Fæces left in so well purified a Tartar. This liquor being thus prepared is very profitable for the taking away and curing of all kinds of Tartarous Diseases, by being daily used, or however, it doth at least strongly tame their violence, but you must first purge the Body by Antimonial Medicaments, one of which we will presently shew you.

N. B. This Medicament will be yet far more noble, if all the humidity be vapoured away and the reddish Salt that is left be dissolved in good spirit of Wine and filtered, and the said Spirit of Wine be again

separated therefrom by a gentle Distillation. For so by this second solution, there will be severed yet more Fæces and the Salt it self will get a yet greater purity.

This Salt may be safely used as a most precious Treasure against all the abovesaid tartareous Diseases; For it expells Urine, and drives out all the impurities out of the Reins and Bladder, and hinders the gathering together, and generation of Sand or Stones in those Members.

But if there be already Stones generated, and that they be not too hard, it consumes them by little and little, and carrys them off; provided that Antimonial purges be (as we said but now) afore used to purge the Body with.

I have in these few words taught thee how the *Ludus*, that is, the Dye-like figured Tartar is changed by its own proper liquor Alkahest, or its own Alkalizate Salt into a Medicine resisting all Tartareous Diseases. The Dose thereof is a Scruple in Wine, Ale, or other Vehicles, oftentimes every day, or twice at the least, *viz.* Morning and Evening, for such as are fifteen or twenty years old and upwards, and they must fast after the taking of the medicament, for some due time.

Such as are younger, from three, four, to ten, or twelve may take at one time, three, four, six, eight, or ten grains, according as they are older or younger.

This so excellent a medicament have I described for the benefit of mankind, nor is there as far as I know, a better, though it seems to arise of so vile a Parentage, and be so mean. Suffer not thy self to be affrighted by any one, but use the same boldly, whensoever necessity requires; and firmly believe me

that thou wilt not find a better, I do not deceive thee; and the truth hereof will be demonstrated by its use.

This is a quick and wonderfull purification of Tartar, and a changing it into a sweet Salt, which is neither sweet nor sour, but a midling tast 'twixt both, and it gets a middle nature, from the Acid and the Alkalizate Tartar. Now follows the Antimonial Purge.

C. *An universal Antimonial Purge to be used in all grievous Diseases, with, a very happy success.*

Take of Crude Antimony, Tartar, and Niter, of each alike, Powder them each apart, commix the Powders, being mixt, put them in a melting Pot or Crucible, and kindle them with a live Coal, that by this kindling they may flame up, and go into a ruddish kind of coloured mass. Your Pot being yet hot set it into your Wind Furnace, and melt it, that all your matter may flow in the Crucible like water, then pour it out into your Cone, and being cold take it out, and separate the *Regulus* therefrom, and lay it by for other uses, because 'tis not serviceable for the operation here minded. Now out of one pound of Antimony, you'l have eight Lots, or four ounces of *Regulus*, so that of your one pound you will get a *Regulus* of four ounces or the fourth part of the pound. The *Scoria*'s which will be of a reddish colour and of a fiery tast upon the Tongue must be again melted in the same Pot they were melted in, if it be whole, or in some new Pot, and when they flow, put a live Coal into the Pot. The Salt peter will seize upon the Coal, and being occupied about corroding the same, will let fall the remainder of the *Regulus* it as yet held up. Then the matters being poured out into your Cone, and cool, strike off the *Regulus* at the bottom with the stroke of an hammer, and beat the

Scoria's which will be of a red colour and fiery tast, into Powder, and being thus poudered let the Salts be extracted [or dissolved] in the heat with common fair water; the which holding in them the most pure Sulphur of Antimony do turn the water into a red *Lixivium*, in which is hidden the Medicine that we seek after; and is to be gotten thence by the following way. For after that the Sulphur is dissolved, by dissolving all that will be separated by the Salts or Lye, the Reliques or Remainder are good for nothing.

Having so done, dissolve white and purified Tartar in fair water, in some glazed Pot, and thou shalt have an acid Solution; being thus hot as it is (for when 'tis cold the Tartar will again shoot in it) pour it by little and little into the Antimonial *Lixivium*, and it will debilitate the same, so that the Sulphur of the Antimony will fall down to the bottom in the form of a yellowish or reddish Powder. When all the Sulphur is setled, separate the clear Water of the Salt, from the Sulphur, by canting it off; then pour on some warm Water and wash it so often till all the Salt be gone off. Then philter it, that all the Water may be separated and the Powder stay in the Philter, which you shall put upon new and dry Cap-paper thereby to remove all the wateriness, and then dry it in the heat of the Sun. This is that Universal purging Medicament which drives out all malignant humours by all the Emunctories, *viz.* by Vomit, Stool, Sweat, Urine, and Spittle, out of the whole Body; and that very safely if warily administred, and the Dose thereof not too much encreased; in which case even the Galenical medicines themselves do hurt, if their due Dose be exceeded. Hereupon it is better that there be used at the beginning rather a lesser Dose than too much, that so no errour may be committed,

and a safe trial may be made, how much the strength of the Patient will bear or not bear. And albeit that the Dose of this medicament should be given in so small a Quantity as not to work, or have any visible Operation at all, yet nevertheless it well performs its Office, and drives out the Distempers, but yet more slowly than when 'tis administred in a due Dose, such as may give about one, two, or three Stools. And to such as are strong and youthfull Persons, the Dose may be given in such a Quantity as to cause Vomit, in such I say as can brook vomiting. The usual Dose for those that are above fifteen Years of Age is, one, two, three, four, or five Grains, according as they are older or younger. To Infants and such as are a little elder an eighth part, a quarter, or half a Grain even to an whole Grain, may be administred, with regard had to the Age and the Disease. This medicine is of good use in all kinds of Diseases, and in all kinds of Men, [and Women] save onely Women with Child; and to them you must administer either none at all, or at least wise so little as to be sure it provokes not to any inclination of vomiting. And the like is to be observed by such Persons who are so weak, as that they clearly want strength requisite for this Operation [of vomiting.] But yet it may be used even to new born Infants, *viz.* for Convulsion Fits with which a great many of them are wont to be snatch'd away without any remedy. The Dose must not exceed the bigness of a Rapeseed, and it must be administred in the Mothers milk. But if the Infants are grown already up to be somewhat stronger and are above half a Year old, the Dose of the said medicament is to be a little encreased, that it may operate visibly, and so cast forth all the malignant humours out of their Bodies; and they themselves may not be afterwards afflicted with the

Small-pox, and other such like Diseases as Infants are subject unto. Verily, all the Children whom I have given this medicine unto, have not hitherto tasted of those Diseases; the which truth the Parents of such Infants and others can confirm by their Testimonies. But especially this medicament is a most present remedy against the Epilepsie both in young and old, and a most certain Secret in the Plague and all Feavers; and a most excellent purge in the Gout, Leoprosie, French-pox and other most grievous Diseases; and likewise in external new Wounds, in Fistula's and old Ulcers, what Name soever they are called by, if it be but used inwardly to purge them. Briefly, this medicament hath scarce its fellow, so that we have no reason at all to regard such men as out of meer ignorance, oppose and slander Antimony in their learned bawlings, and say that it is nothing else but Poison, and therefore no ways profitable. But let no body believe their barking, but first try the same, and he will clearly find the contrary.

This indeed I readily confess that Antimony is of no use in the body of man, nor can it be, afore it is prepared; but after preparation I do boldly affirm it to be a most admirable medicine.

Concerning which, reade but the chiefest of the Ancient Philosophers, especially *Basil Valentine*, who in the honour of Antimony wrote the Triumphant Chariot [thereof.] Do but see what *Paracelsus*, *Alexander Suchten*, and several others have recorded in writing, concerning the incomparable Vertues and Power of Antimony; by all whose Writings is clearly evinced, what things lie hidden in Antimony, I forbear to speak of other Physicians as well modern as ancient. For it possesseth the Vertues and Powers of all Vertues and Powers concentrated. What need

many words? Let it be brought but to the Test, and it will most apparantly testifie by its trial, what Treasures it carries in its bosom. The things that I speak of here proceed out of meer pity and love to my Neighbour, that I might help his sickness and miseries. A very small Portion of the said medicament may be able not onely to preserve a whole Family for a whole Year free from all the Diseases that might befall them, but also to rid them of them. So likewise it sends packing all the sicknesses of beasts by its effectual Virtue. I was willing from a faithfull and good mind to bestow this comfort and help upon mankind, against all incident Diseases, whether external or internal; In the third following Century shall be described more very excellent medicines against all kinds of Diseases, which may be made use of by such as without cause are afraid of Antimony.

And as touching that Salt which is made by the mixtion of the acid Water of the Tartar, and the *Lixivium* made of the Tartar calcined; it is not inferiour as to its excellency and eminency to the but now spoken of Sulphur of the Antimony it self; herein onely is the difference, that there is to be administred a bigger Dose thereof. And therefore it must not be thrown away, but after that the Sulphur is separated, the insipid Water is to be evaporated, and there will then remain a yellow Salt behind, which has even yet in it no small Portion of the Antimonial Sulphur; and therefore 'tis in a manner better than the Sulphur it self, because of its own peculiar Nature, which by the discharging its own office [or proper work,] may be even *per se* reckoned up amongst those most excellent medicines which strongly resist all Tartareous diseases.

For that reason therefore do I commend this Salt most highly to all such as are burdened with grievous Diseases. The preparation thereof is altogether easie, for it is not made of any chargeable matters, but mean ones, and therefore not without cause to be highly esteemed of.

The dose of this so excellent a Salt is to be encreased or diminished according to the Quality of the Persons and the Diseases. To such as are of ripe Age, one Scruple or somewhat more is sufficient. To Infants, and to such as are a little older, from one to twelve Grains may be given, regard being had to the difference of their Years. It gently purgeth the belly, without any kind of Danger, it draws out all evil humours, and especially it helps the gouty and stony Persons with a most wisht for Easement.

The weight of those two contrary Salts, *viz.* of the fixt Salt of Tartar by which the Sulphur is extracted out of the Antimony, and of the common and acid Tartar dissolved in Water, and which precipitateth the Sulphur of the Antimony out of the *Lixivium*, cannot be certainly defined and limited. For according to the greater or lesser Quantity of the *Lixivium*, is required more or less of the Tartar water to be poured upon the *Lixivium*, that so being mortified it may let go that Sulphur of Antimony it holds up in it self. The *Lixivium* it self will shew you if you have not poured on Water enough of the Tartar by its being not yet freed of all the Sulphur, and that there is more Water of Tartar required to allay all its Acrimony that all the whole Sulphur may be turned out. A bigger Quantity of the Water of Tartar poured on the *Lixivium* [than just enough] doth not spoil it; it takes in as much of the dissolved Tartar as it can, and what is overplus remains an

acid Tartar, and is not changed in its Nature. But whatever of it is dissolved in the *Lixivium* is no more Tartar, because it becomes a midling Salt of the two, neither acid nor sweet, but partaking of both Natures, and dissolves in cold Water, which the acid Tartar will not do.

This Salt therefore is able to perform great matters in medicine, and not onely in medicine but in Alchimy too, and in other Arts can it exhibit abundance of riches; concerning which thing, more shall be spoken in another place.

Thus finish I now this my second Century, wherein I have not onely abundantly supplied those things which by reason of the overmuch hast, I could not insert in the *Appendix* to the fifth Part of the Prosperity of *Germany*, but have withall laid open some part of the Use of my *Sal Mirabilis*, as much as the shortness of my time would give me leave to do.

If by the Grace of God I have a yet longer Life vouchsafed me, I will about half a Year hence, bring so great a benefit not onely unto my own Countrey, but perhaps even to the whole Christian World, as ever they received from any man, in so much that the World shall seem as if 'twere new, and so for the present I rest and make an End.

The Third Century OF GLAUBER'S Wealthy Store-house of Treasures.

Wherein many Profitable Chymical Secrets are discovered.

Faithfully translated out of the High-Dutch of the Authour.

Courteous Reader,

Having some Years since begun to communicate to the World my manifold profitable Inventions in Centuries, but of late been hindred by sickness and other impediments from continuing the same: yet now being sollicited thereto by many Lovers of Art, I could do no less than to endeavour to give them some satisfaction by the publishing of these; and withall assuring them, that, in case God be pleased to continue my Life

(notwithstanding that because of great Age and Sickness I am fain to keep my bed) I intend to compleat the rest of my promised Centuries, desiring the kind Reader in the mean time to accept of these three, and to pardon the confused manner of writing them, having for want of leisure, set them down as I found them in my Notes, being chiefly the occasional discoveries and inventions during my Chymical Labours. Neither would I have the Reader offended that in some places I break off so abruptly, especially where I am speaking of the matter which Adam *brought with him out of Paradise, for whatever may be wanting in this fifth Century shall God willing be supplied in the sixth: I also desire the Reader not to be moved by the Calumnies of any Envious ignorant Persons, to think that the things here set down (being most of them new and unheard of inventions) are mere Fables and invented matters, and no real experimented Truths, but rather remit the verification of them to time and his own Experience, which will not fail to satisfie him of the Truth of the Particulars herein contained. Farewel.*

THE THIRD CENTURY.

1. To wash common Tartar Snow white in a few hours time, and reduce it to a pleasant Salt which dissolves in cold Water, and wherewith of Sugar, Honey, or any sweet Fruits at all times, yea all hours of the day, and in all places Liquors may be prepared like to Wine in Tast, smell, colour, strength and virtue, and of which afterwards good Brandy and Vinegar may be made with great profit.

2. To purifie common Salt in great quantity, in one days time, so as to become very white, pure and

transparent and of a pleasant Tast, shooting into cubical Crystals fit for the Tables of great Persons, its tast being very agreeable, and the meat season'd with it much more wholsome than that which is drest with the common Salt. *See the Treatise of the nature of Salts.*

3. A secret to preserve all sorts of Wine, and make them durable, whether of Grapes, Sugar, Honey, Apples, Pears, Quinces, Figs, Plums, Cheries, Malt, Wheat, *&c.* and is of great use to a House-keeper.

4. Any of the forementioned Wines may with ease be turned into very good Vinegar, not inferiour to that which is made of French or Rhenish Wine. *See my Vegetable Work.*

5. To make good *Sal Armoniack* of several contemptible matters which are trod under foot and cast out on the Dunghill very easily and in great quantities, so as one Man every day may prepare one hundred pound weight of it with ten shillings charges. *See my Treatise of the Mineral Squill in order to long life.*

6. A secret water wherewith in an hours time the yellow colour in Diamonds may be drawn from them, which makes them ten times more worth than they were before. *See my Treatise of the Divine Character.*

7. In like manner may the dark red colour of Granates be extracted, leaving them onely so much colour as makes them like Rubies. For Granates and Rubies resemble each other in their bodies and colour, the onely difference between them being, that the Granates abound with too much colour, which makes them less valued, when therefore some part of their colour is extracted from them, they do

in virtue, hardness and beauty, equal Rubies, one Karat of which is more worth than ten pound of Granates, so as this extraction must be very gainfull to him that is Master of it. *See my third Appendix to the seventh part of my* Pharmacopœa Spagyrica.

8. In like manner also may be extracted the colours of blue Saphyrs, yellow Jacinths, Topaces, and Purple Amethysts, by which means they become white as Diamonds, and when brought to the same degree of hardness are every whit as valuable as they. *See my third Appendix as before.*

9. In a moments time to rob *Sol* of its colour and make it white as Silver. *See my Treatise of the Seal of God.*

10. To separate from *Mars* and *Venus* when dissolved in Water as well as from any other Vitriol, by means of an artificial Precipitation, their hidden spiritual *Sol* or Tincture, and that in a moment; a thing of great use in Physick, as well as in the transmutation of Metals. *See the second Appendix.*

11. To extract *Sol* out of Sand and Stones with great ease and little charges, which by precipitation is afterwards separated from the dissolvent, retaining its former strength, and may be made use of again for the like extraction. *See the prosperity of* Germany *the seventh part, or* Novum Lumen Chymicum.

12. To extract *Sol* from *Luna* with a small quantity of dissolvent, which, after precipitation of the *Sol*, remains in its full strength, and may be used as before to the great gain of the Artist. *See* Glauber's *Laboratory, and prosperity of* Germany*, 7th. part.*

13. In one days time to prepare a particular, whereof one part will tinge three parts of *Venus* into *Lune*. *N. B.* This Tincture is a white Stone which

being placed in a fit Furnace, and a due fire administred, within few days the whiteness will be changed to a yellow colour, and that into a fix'd red, whereof one part being cast upon four parts of *Lune* in Flux, exalts it so far that in the separation it gives a fourth part of *Sol*. Which sudden fixation is performed by the proper Agent of the matter which is white of it self, and yet affords a red Tincture, when handled, as is here set down. *See my Treatise of the secret fire of* Artephius.

14. In a short time to prepare a particular Tincture of a red subject, which exalts Silver to that degree, as to yield much *Sol* in the separation. *See my explication upon* Pontanus *his Letter*.

15. A good graduating water which being digested with *Lune*, makes it yield much *Sol* in separation. *See the Treatise concerning the most secret natural Sal Armoniack every where to be found.*

16. Another graduating water in which Mercury being digested, becomes coagulated into *Sol* and *Luna*. *See the fiery Alkahest.*

17. Another fixing water, which being once or twice abstracted from Mercury makes it lose its property of making *Sol* and *Venus* white, and on the contrary gilds *Luna* when rub'd upon it. I have as yet carried this experiment no further, but am of opinion that if Mercury were long enough digested in the same, it would turn the Mercury into Tincture, coagulating and fixing each common *Mercury* into *Sol*. *See Hastecal.*

18. A volatilizing Water which being abstracted from *Sol* highly exalts its natural colour, and carries it over the Helm, which done it is no more common *Sol*, but may in a short time be fixed into a

transparent red Carbuncle. *See my third Appendix, &c.* concerning the Griffins Claws, and Eagles Wings.

19. A water of like nature that volatilizeth all fixt matters, wherewith in one single Distillation, the Tincture or Soul may be extracted from *Mars*, *Venus*, and all coloured Stones, and carried over the Helm; which Tinctures afterwards with one rectification are highly purified, and have their Medicinal and tinging virtue doubled, which exalted and multiplied Tinctures, notwithstanding their great volatility may within twenty four hours time be concentrated, by means of a secret Magnet, and fixed into a Stone, penetrating all compact Bodies, with which incredible things may be done in Alchymy and Physick. *See my third Appendix, &c.*

20. To prepare a Salt in an hours time, and without extraordinary charges, which makes all fixt matters volatile, and is of such virtue that when a little of it is joyned with Spirit of Wine it makes it so strong and fiery, that it dissolves all Metals, Minerals, Animals and Vegetables, carrying their Q. Essence over the Helm, and is the effecter of wonders in Physick and Alchymy: so that he who knows how to prepare and make use of this wonderfull Salt, needs never want either bodily health, or a competent supply of maintenance. *See my Treatise of* Elias Artista *in Quarto.*

21. A wonderfull, to all Men known, but withall contemptible matter, which every where may be had for nothing, which whosoever knows, together with the use of it, needs never want, because thereby he may effect whatsoever is necessary for Soul or Body. *See my first, second and third Appendix of* Pharmacopœa Spagyrica.

22. The manner of preparing a running Mercury

out of all Minerals and Metals, and that in one days time, which joyn'd with *Sol* becomes fixed into *Sol*. *See my third Appendix*.

23. How such a Mercury may be prepared in an hours time of the martial *Regulus* of Antimony, without any charges to speak of, which is a true Tincture, fixing the imperfect Metals into *Sol*. *See my Treatise concerning the secret Fire of the* Magi.

24. A water made of a particular sort of Chalk which changeth a yellow or brown skin into white, and which cannot be wash'd off with water, of valuable use for Ladies and Gentlewomen. *See my 4th Century in* Folio.

25. A water prepar'd of *Sol*, which turns white hairs into a yellow gold colour. *See my Laboratory*.

26. Another water made of Silver, which tinges hair cole-black, good for such as are gray hair'd, and endeavour to conceal their Age. *See* Glaub. *Concentrate.*

27. A water made of *Sol*, which colours the hair and skin of Man, as also the bones and horns of Beast, and feathers of Birds, of a fair lasting Purple. *See* Glauber's *Laboratory in* Quarto.

28. A water into which when any Metal is put, it begins to grow within twenty four hours time in the form of Plants and Trees, each Metal according to its inmost colour and property, which Metalline Vegetations are called Philosophical Trees, both pleasant to the Eye and of good use. Vide *my fourth Century*.

29. A water made of Sand and Flints, having the property of changing Wood that is laid in it, in a short time into hard Stone of several colours

according to the pleasure of the Artist.

30. A dry water, or rather Stone, upon which if any volatile saline Spirit be poured and set in the Sun, it presently sucks in the volatile mineral Spirit and in one days time makes it so fixt that it may be made red hot in the Fire, without any evaporation. *See my universal Coagulator.*

31. By this means also may the combustible stinking Sulphur, the greatest enemy of Metals be fixed, which afterwards being cast upon the imperfect Metals in Flux, doth meliorate them, and make them afford *Sol* and *Luna* on the Cupel with profit. *See my second Appendix.*

32. In like manner may Antimony without any loss of weight be fixed, so as no more to cause vomiting, but casts all evil out of the Body insensibly by sweat, restoring health, and renewing youth. *See my proper Agent.*

33. In the same manner may Orpiment be fixed, so as no longer to be a Poison, but a Meliorator of imperfect Metals.

34. Likewise also may Arsenick be fixed within two or three days time, so as it may safely be taken inwardly, being an excellent Diaphoretick for the cure of Diseases, and good to exalt Metals, so that in separation they afford Gold and *Lune*. *See my proper Agent.*

35. Much after the same manner may Mercury, without any considerable loss of weight (though with longer time and more patience) be fixed, so as to suffer himself to be melted and hammer'd like any other Metal, and on the Cupel leaves *Sol* and *Luna*. *See my Treatise of the universal Coagulator.*

36. In like manner may the martial *Regulus* of Antimony be fixed into a tinging Stone, that meliorates all imperfect metals.

37. A wonderfull Magnet which being put into any watry Liquors or Oils, draws the water to it self leaving the Oils more pure, subtile and penetrating. *See* Elias Artista.

38. By means of this Magnet, we can separate from the highest rectified Spirit of Wine, one half of insipid water, which Spirit of Wine after this separation is an effecter of wonders.

39. This Spirit of Wine when poured on pulverised Coral and thence abstracted, brings their red Tincture over the Helm, being a wonderfull Cordial and purifier of the Blood.

40. By means of this Spirit of Wine, may the Cordial Virtue of Pearls be brought over the Helm, being of great efficacy for the recovery of sick and weak Persons.

41. This Q. Essence of Wine being poured upon clean washed Egg-shells, dissolves them, and distilled from them, brings over with it their Stone-breaking and dissolving virtue, and is a singular remedy in the Gout, and the Stone of Kidney or Bladder.

42. The same also dissolves the *Lapis Lyncis* and *Judaicus*, as also Crabs Eyes so called, and other Stones found in Fishes, carrying their virtues with it over the Helm. *See my fifth Century.*

43. The same Spirit of Wine dissolves, extracts and brings over the Helm, the inmost virtues of all Animals and Vegetables carrying them over the Helm, whence incomparable medicaments may be prepared.

44. Black Snails such as are found in *May* on the Grass dissolved in the same, and brought over the Helm, and duely exhibited to those that have the Gout or Stone, carries off all tartareous slimy matter from the Kidneys, Bladder, and other parts of the Body by Seige and Urine.

45. Aloes, Saffron and Myrrh dissolved in the same, and their Tinctures carried over the Helm, affords an excellent *Elixir Proprietatis*, very conducive to long Life. *See* Paracelsus *concerning* Elixirs.

46. Cantharides dissolved therewith, and brought over, are a powerfull Diaphoretick, above all others, cleansing the Kidneys and Bladder, but ought to be heedfully used, because it is a vehement Medicine, which being overdos'd will hurt the Kidneys, Bladder and Ureters.

47. The Leaves of Helleboraster, extracted and brought over with the same, affords an Excellent *Aqua Vitæ*, conducing to long Life. *See Paracelsus.*

48. Sea Squills being dissolved in this Spirit of Wine, and spiritualized by being brought over the helm, is of great use for removing of Diseases, and maintaining of health.

49. *Nux Vomica*, being first grated and then dissolved therein, and their restorating Vertue being brought over the Helm, doth wonders in restoring the decayed strength and health of man, but must be used with understanding.

50. Common Mercury dissolved and brought over with the same, is the highest Medicine against the French Pox and all venereal Diseases.

51. Mercury of Antimony prepared after the same manner, affords a Medicine against all Diseases of

mankind.

52. Fixed Antimony thus extracted and brought over is a Diaphoretick curing all Diseases, and restoring the highest degree of health.

53. In like manner may many excellent Remedies be prepared, out of all Vegetables and Minerals, for restoring and preserving of health.

54. A further use of our Water attracting Magnet is this. Abstract the Oil of Tartar, Hartshorn, Amber, Soot, or that which is distill'd from Smiths Coals, and the Magnet will attract all the Water and bad Smell to it self, which remains with the Magnet, and the pure clear and subtil Oil, onely comes over, which Magnet being made red hot, loseth its water and stink and may be made use of as before.

55. In like manner may the Oil of Wax and Bricks, commonly called the Oil of Philosophers, be deprived of their bad Scents, and made exceeding penetrative and pleasant.

56. So also may all Vegetable and Animal Oils distill'd by retort, be purified and made pleasant.

57. Likewise all the Oils of Herbs, Seeds, Woods and Spices, which with the addition of Water are distill'd by a common Still, may by distilling them from our Magnet be made much more subtil, and their sweet Smells much more strong and piercing; so that a little of these Oils set in an open Vessel, perfumes not onely the Room in which it is but also the whole house, they being so volatile that without any Fire they vanish in the Air.

58. And as by means of this volatalizing fiery Spirit, the pleasant and well scented Oils of Spices may be greatly meliorated and exalted; so likewise

may all stinking and poisonous Vegetables, Animals or Minerals, thereby be made much more stinking and venemous, so as their Smell alone will be sufficient to kill men, doing it with far greater expedition than any Corporal poisons whatsoever. See *Elias Artista*.

59. All well scented Oils, may by means of our volatile saline Spirit, be purified to the highest Degree, and afterwards be reduced to a hard Body: which Body then is no common gross Body (as being a coagulated Spirit) but a clear, transparent spiritual pure Body.

60. This Labour may with profit be practis'd on Amber, whose Oil being by rectification made clear and transparent, and then digested with our fiery salt Spirit, becomes hard again as it was before distillation; by which means we may make pieces of Amber as big as we please, and may mix with it some small Threds of *Sol*, and so shall have the old highly esteemed Stone called Chrysophoros; or else we may put into it, whilst yet it is soft, little Worms, Flies, Spiders, Pismires, or whatever else we please, which is a notable Curiosity and shews as if they were grown there, to those that are ignorant of this Art.

61. In the same manner may the Oil of Turpentine be reduced to a hard Gum, to very good use and purpose.

62. All distilled Oils of Seeds, Woods and Spices, when by long standing, they turn yellow, red or thick, may by means of this fiery salt Spirit be again made clear, thin and transparent, when some of the said Spirit is poured on the said Oils and so distilled, some part of the Oil comes over clear and transparent, the other part remaining in the Glass, in

the form of an hard Gum, in which small Insects may be inclosed as before said of the Amber.

63. Amongst all Oils these following are apt to grow thick and ropy, *viz.* the Oils of *Lignum Rhodii*, Oranges, Limmons, Juniper-berries; those of Cloves and Cinamon are apt to grow red. The Oils of Fennel-seed, Anniss, Coriander, Caroway and Cumin-seed, and all other Oils distill'd from Herbs and Seeds, that have hollow Stalks, and are umbelliferous, forasmuch as they abound with much volatile Salt, are apt to turn thick: If any of these be rectified with an acid saline Spirit, it immediately destroys the volatile Salt, and the Oil becomes clear and transparent, and the remaining part of the Oil becomes hard as a Gum, and is a special inward and outward Medicine.

64. And forasmuch as a fiery saline Spirit can make old and red Oils clear, thin and transparent, we may conclude, that such a Spirit is able also to volatilize and bring over by distillation those Oils which by length of time are become hard and dry in Seeds, Herbs and Woods, and cannot by maceration in water be brought over, but must by this more powerfull means be made thin and volatile, that they may afford their Oils as easily in distillation, as green Seeds and Woods are used to do.

65. Now as thick and ropy distill'd Oils may be made thin, by means of saline Spirits; so there are some salt Spirits wherewith we can coagulate all thin and subtil Oils, in the form of a volatile pleasant strong scented Salt, of great use in Physick.

66. In this manner, *viz.* by pouring a strong saline Spirit upon them, we can distill subtil and powerfull Oils from all rosins, gums and thick juices, and afterwards reduce them again to the hardness of

Amber.

Thus Mastick, Frankincense, Benzoin, Storax, Camphir, *&c.* afford very pure clear and transparent Oils, which when hardned to the consistence of Amber, draw straws and other light matters to them like it.

67. In like manner also can all sulphureous Minerals be purified to the highest degree, when distill'd with such a Spirit, and then may be reduced again to hard transparent clarified Bodies: and amongst the rest Antimony and Orpiment do afford in this way most powerfull and superlatively penetrating medicinal Stones.

68. And as these fiery saline Spirits do bring over by distillation all unfixt sulphureous Subjects, and purifie them; so they do the same in fixt Sulphureous Metals, e.g. *Mars* and *Venus*, which Metals being thus purified may be fixed into tinging medicinal Stones.

69. They who know the art of the metallick purification and fixation, are possessours of an incomparable Treasure, forasmuch as by this means in three days time with the charge of one Crown, a true universal Medicine may be prepared, for the Bodies of men and metals, not in great quantity indeed but sufficient to assure the Possibility of it, and may afterwards be tryed in greater quantity.

70. By means of such a fiery salt Spirit fixt Chrystals, Flints, and other hard Stones may be made volatile and spiritual, and then may tinge them with what colours we please, and coagulate them again into hard transparent colour'd Stones, and that of what form and fashion we please. This is a very gainfull Art, because fair transparent colour'd Stones are always preferrable to *Sol*.

71. And as we have understood that by means of volatilizing waters, nor onely Vegetables and Animals, but also minerals and fixt metals may be made volatile, and their purest parts brought over the Helm, and by this means do wonders as well in Physick as Alchymy. Now though this separation of the pure part from the impure, by means of Distillation be high'y to be valued, yet there is a better, easier and less chargeable way to separate the purer parts from all Metals, Minerals, Stones, Sand, and coloured Earths containing *Sol* and Tincture, by means of a Magnet, which being laid in the Solutions of Metals, and extractions of Stones, within a few hours time draws to it all the spiritual as well as fixt *Sol* and Tincture contain'd in the said Solutions; so that after abstraction of the dissolvent by Distillation, we find the dis-animated dead Body, which being put aside, we separate the attracted *Sol* or Tincture from the Magnet, and thus obtain whatsoever good was hid in the foresaid gross Bodies. *N. B.* Though indeed this extraction of *Sol* and Tinctures be very easie, as hath been said, yet I shall here, for further information of the Reader, set down what ought to be observed in the extracting of *Sol* from each Metal, Mineral, Stone, or Earth. And first of fixt *Sol*.

72. When there is fixt *Sol* in Sand or Stones, we need onely to pulverize them, and pour upon them *Aq. Regis* wherein common Salt hath been dissolved, and let them boil together a quarter of an hour, by which means the *Aq. Regis* draws the *Sol* out of the Sand and Stones, in which extraction if we then put the *Sol* attracting Magnet, it will draw the *Sol* to it self, which being separated from the Magnet, is melted down with fluxing Powder, the *Aq. Regis* continuing good to be employed on the like occasion.

73. But when in the Sand or Stones there is no fixt but onely a volatile unripe *Sol*, then we must put the Sand or pulverized Stones into a Glass Retort, and pour upon them of our volatilizing fiery Alkaliest, and abstract the same from the Sand or Stone, by which means it carries the *Sol* over with it, which hath been attracted by the golden Magnet, which being reduced will be found good and fix'd *Sol*. The dissolvent may again be used to the same purpose.

74. But if the Stones besides the *Sol*, do also contain *Lune*, then an *Aq. Fortis* must first be poured upon them to extract the *Lune*, and afterwards precipitate it by casting some common Salt into the Solution, by which addition of Salt the *Aq. Fortis* is turned into an *Aq. Regis*, and being poured upon the Stones, it extracts the *Sol* also.

75. For if at first we should pour an *Aq. Regis* upon these Stones, it would indeed extract the *Sol*, but withall so alter the *Lune*, that it would be impossible afterwards to extract it with *Aq. Fortis*, and therefore we are to proceed in the manner abovesaid.

76. In like manner also we are to proceed with white, yellow and red Earths, for to extract the *Lune* and *Sol* that is in them. And if it be a fat Earth and contains fix'd *Sol*, it must first be made red hot to rob it of its fatness, because else it would devour too much *Aq. Fortis*.

77. But when the Earth contains onely volatile *Sol*, as the yellow Earth of *Silesia* and the red *Terra Lemnia Sigillata*, it must not be made red hot, but pour some Alkahest upon it, and so bring the *Sol* over the Helm.

78. Yellow and red Earths do commonly contain *Sol* or *Lune* or both, and therefore we may boldly

make trial of them; for oftentimes a great treasure is shut up in very contemptible Earth, such as might serve to maintain many thousands.

79. In the same manner we may extract the fixt as well as immature *Sol* out of Ruddie, red Jasper, and red Blood-stones, which in some parts are found in great quantities.

80. With our *Sol* attracting Magnet, we can extract much *Sol* out of any common Vitriol, and after the *Sol* is extracted, reduce the Solution to Vitriol again, which is as good for the Dyers use as it was before.

81. With the same Magnet, good *Sol* may be extracted out of those yellowish, reddish, and greenish waters which flow from some Mountains, which waters being to be had for nothing, must make this work very gainfull.

82. And in case we should not be able to meet with this sort of running waters, then we may take the Copperas Stones which are often found in Sand, but for the most part grow in fat Earth, which when they are expos'd to the Air, fall in pieces, and having water poured upon them afford a good Vitriol, which easily yields the spiritual *Sol* it contains to our Magnet. So that an Artist can scarcely be to seek for subjects, from whence unripe volatile or fixt *Sol* may be had with profit.

83. *N. B.* But when we have a mind to bring the volatile *Sol* which is in red Sand, Stones and Clay, with volatilizing waters by Distillation over the Helm, it is good to add to our Eagles Wings, or volatilizing water, some of our most secret *Sal Armoniack*, by which the same is extreamly strengthned and animated, so that like a *Griffin* for strength, it carries the Man on Horseback away in

the Air to his Nest.

84. *N. B.* This *Griffin* is the Artist, that prepares this fiery water, wherewith he seizeth as with his Talons the Man armed Cap a Pe; that is, red Stones, Sand and Earth, abounding with a martial Tincture, extracts and carries them to the young ones in his Nest, that is, provides a good maintenance for his Family thereby.

85. But because to these operations of extracting *Sol* volatile and fixt, and Tinctures from the subjects just now mentioned, when we work them in quantities, much *Aq. Regis*, or other like waters are required, which every one hath not an oportunity to prepare for himself, and therefore must buy them, which encreaseth the charges of the operation; wherefore I am willing to teach a near way to prepare these corrosive waters.

86. Forasmuch then as we know that Vitriol is an universal acid, and the chief of all Salts, and the Spirit it yields by Distillation, much more fiery than that which is forc'd from other Salts, therefore we may make use of the Oil of Vitriol, for a *Basis* with the help of others Salts, to prepare several sorts of saline Spirits, with small labour and charges, in manner as follows.

87. *Recipe* two parts of Niter dissolved in water and one part of Oil of Vitriol, distill them in an Allembick, and you will obtain a good *Aq. Fortis* to dissolve *Lune*, *Saturn*, and *Mercury*. This operation spends little Fire and comes over easily.

88. And if we dissolve one pound of Salt, and as much Niter in three pound of Water, adding thereto one pound of Oil of Vitriol, and distill it in Sand, by Alembick or Retort we shall get six pound of good

and strong *Aq. Regis* to dissolve *Sol*, *Venus*, *Mars* and *Jupiter*.

89. But when we take two pound of Salt, and dissolve it in three pound of Water adding one pound of Oil of Vitriol, we get five pound of good Spirit of Salt. The Salt that stays behind is called *Sal Mirabilis* or wonderfull Salt, because wonders may be done with it, as appears from several parts of my Writings, these Salts being of divers vertues according to the nature of those Salts that are added to the Oil of Vitriol in Distillation.

90. These Salts are commonly added to metals, and melted down with them in Crucibles, by which means they become dissolved in the dry way, which is much easier and readier than the wet way of dissolving.

91. In particular by this way we can dissolve Sulphur, which resists all corrosive saline Spirits, and remains undissolved by them.

92. Now to obtain Oil of Vitriol with ease and in great quantity, we may proceed several ways, and especially thus, by dissolving Vitriol in water, adding a contrary to it, which separates all its impurities, by which means the purified Vitriol may with a small Fire be reduced to Oil, so as one pound of Oil of Vitriol will not require above ten pound of Coals.

93. And because Oil of Sulphur is of the same nature with Oil of Vitriol, yea is more proper for some operations than it, therefore we may make use of the same Oil of Sulphur, to prepare strong saline Spirits, especially because the same may be prepared in quantity and very compendiously, according to a particular way described by the Ancient Philosophers.

94. They have taught us the preparation of Oil of Sulphur in their wittily devised Fables, giving to this Oil the name of *Venus*, whom *Vulcan* when come to Man's estate took to Wife: by the word *Vulcan*, we are to understand every combustible Sulphur, and by the word *Venus*, its incombustible corrosive Oil, which for this reason probably they called *Venus*, because when a drop of it falls on burning Coals, it gives forth a red smoak like to *Venus*, or because this acid Oil like a wicked Woman, has sharp Teeth, and a keen deceitfull Tongue, wherewith they lay hold of Men, and lead them astray in the same manner as this Oil cleaves to, and enters a League with every metal to which it is joyned, forasmuch as all metals proceed from Sulphur, and have great affinity with it, as the Woman hath with Man.

Here follows an Explication of the Poetical Table, teaching us to make the Oil of Sulphur in quantity.

95. We reade that *Vulcan*, that is, a combustible Sulphur, took *Venus* to Wife, by which is meant the incombustible Oil of Sulphur; now whilst *Vulcan* was busie at his work in the Caves of the Earth, for he was a Miner and a Black-smith, *Venus* betakes her self to Mars, who lies with her; now when *Vulcan* found his Wife in the embraces of another Man, he calls all the Gods to his help, who appearing, cast an Iron Net over *Mars* and *Venus* that they might not escape, but with great shame be exposed to the derision of the Gods.

96. When *Vulcan* is kindled in a Furnace made for that purpose, that is, labours in metals, the flame carries *Venus*, *i. e.* the Oil of Sulphur into *Mars* his lodging, that is, into the Recipient, which must be fill'd with Steel Wire, where she commits Adultery

with *Mars*, that is, begins to dissolve the same, and produceth a Vitriol, which when exposed to the moist Air, becomes resolved into a clear sweet water, which from the Steel Wire runs into the Vessel appointed to recieve it, which sweet water is nothing else but *Arostrus* the Son of *Mars* and *Venus*, or the martial Oil of Sulphur, or to speak more plainly, the Vitriol of *Mars*.

97. This Vitriol of *Mars* is called by the Philosophers the juice or water of the Birch Tree, and of which they say the Philosophers Stone may be prepared, for many of them have writ concerning it, and pointed to this sweet Iron Juice, which they have termed Birch Tree Waters, because of the likeness it has therewith, for when in the Spring-time we make a hole with a Piercer, reaching to the Pith of the Tree, and thrust into it a Quill or Faucet, much sweet water proceeds from it, which some make use of to brew Beer, because the same is accounted very good against the Stone in the Kidneys and Bladder.

98. This Vitriol also is *Virgil's Arbor Opaca*, or dark Tree, whose Branches he declares to be easily flexible; now what is more flexible than Iron, or Copper Wire, which are therefore compared to the Birch, which is a very juicy Tree, and hath very flexible branches.

99. That this shady Tree is the fittest, according to *Virgil*'s Doctrine, to break off one golden Twig after another is also certain, for I have tried it divers ways and found it to be true, that it affords its golden Twigs very freely to him that knows how to handle *Proserpina*.

100. But if the Artist be acquainted with the use of our *Sol* attracting Magnet, he may then with ease and more profit, without Distillation or Fire, break off the

said Twigs, than he could do with the help of *Proserpina*.

And thus I conclude this third Century, the fourth and fifth follows, which will be found of better use than this.

THE FOURTH CENTURY.

To extract the Sol *that is in Granates.*

1. If Granates be melted with Glass, that contains *Lune*, the *Lune* containing Glass will unite it self with the *Sol* that is in the Granates, which with an *Aq. Regia* may be afterwards separated.

To make a good Mercury *of Wine.*

2. *Recipe* Crude Tartar and pour upon it a Lye of Salt of Tartar, distill in an Alembick, and you'll have a strong Mercury of Wine, which is a much stronger and more fiery Spirit, than Spirit of Urine, especially if some *Sal Armoniack* be added to it.

To make a Mercury of Metals.

3. And if before we dissolve a Metal or Mineral in the foresaid lye of Salt of Tartar, or in the Crude Tartar, before that both these contraries be put together, then the volatile Spirit of Tartar will bring over the Tincture or Mercury of the said metal or mineral in the form of a subtile Spirit. In this manner we may drive the Mercury of all minerals and metals over the Helm.

What the Soul of the greater and lesser World is.

4. *Plato* call'd common Salt the Soul of the great World, and if so, then Salt of Tartar may very well be accounted the Soul of the lesser World: for whatsoever is in the Macrocosm, the same is also in the Microcosm.

All superfluities of Nature afford a volatile Salt.

5. For the Salt of Hartshorn of Hair, Soot, Blood, and of the Seeds of Mustard, Cresses and Scurvygrass, *&c.* are much of the same Nature as *Salt* of Tartar.

A Good Bath.

6. Common water sprinkled upon red hot Flints or Pebbles that are found in running Streams, affords an hot Vapour, which by reason of the subtil Sulphur of the Stones it carries up with it, is very penetrating, so that in this manner without any other Fire we may prepare an hot dry Bath, very available to cure many Diseases by sweating, the great vertue of it chiefly proceeding from the sulphureous Spirit of the Stones.

To separate Sol *from* Luna *by fluxing in a Crucible.*

7. When we have a mind to separate *Sol* from *Luna* by means of Sulphur we need not make use of granulated or filed *Saturn* for precipitation, but instead thereof we may make use of Antimony, because the granulated or filed *Saturn* is made hard and influxible by the Sulphur: neither shall we make use of common *Venus* for precipitation, as *Erker* teaches, but such a *Venus* as hath been made friable with Arsenick or Orpiment, by which means we shall get more *Sol* than without Arsenick, because

Arsenick and Orpiment contain much volatile *Sol*, which in this Operation becomes fixed with the *Luna*.

To recover the Sol *and* Luna *which is got into the Pores of the Crucible.*

8. The Crucible must be beaten into fine Powder, and put into a reverberatory fire, stirring it continually by which means the Antimony and Sulphur vapour away, and the *Sol* and *Luna* remains with the Earth, which, with strong Waters may be separated.

Another way to perform the same.

9. Or we may add filings of *Saturn* to the powder of the Crucibles, and give them a strong heat, by which means the *Saturn* will take in the *Sol* and *Luna*. *N. B.* But the Separation with strong Waters is the more easie way of the two.

To extract the Colour from Sol.

10. *Venus*, *Jupiter* and *Regulus Martis* melted into a mass with *Sol*, and *Venus*, the *Jupiter* and *Regulus Martis* afterwards separated from the *Sol* by *Niter*, then melt other metals as before with the *Sol*, and separate them as before with Niter, which must be continued till the *Sol* have lost his Colour.

11. The dross being afterwards melted in a Crucible, and a small quantity of Coles made of Blood cast upon it, the extracted Tincture of *Sol* will separate it self from the dross, falling to the bottom like a *Regulus*. *N. B.* The metals *Venus*, *Jupiter* and the martial *Regulus* may be separated from the dross onely with common wood Coal.

12. Niter fixed by the *Regulus* of Antimony, and

distill'd with *Sal Armoniack*, gives an excellent *Mercury* of metals, which hath a scent like musk.

To extract Sol *out of Stones.*

13. If we take Sand or Stones that contain *Sol*, and melt them with Lead ashes into Glass, and reduce them again with fixed Salt, then by cupelling this Lead ashes, and the reduced Sand or Stones severaltimes, we shall have the *Sol* that was in the Stones.

To extract Sol *from Stones.*

14. The black or brown Pebbles found in Brooks, and which break smooth like Glass, being mixed with the best Eagles wings and distilled by retort, yield much *Sol.*

A Tincture from Metals.

15. *Jupiter* is the highest Regent over the upper Constellations. *Sol* gives to all Stars their Light, *Mars* rules upon Earth, and *Saturn* in the Earth, and of these four an universal Tincture may be prepared.

16. *Mars* and *Saturn* in particular yields great riches, when being reduced to Glass they are several times driven through a Reverberatory, according to that of the Ancient Philosophers; by *Saturn* and *Mars*, fire and art, great wealth may be found.

That there is a renovating vertue hid in Spiders.

17. Spiders renew themselves every month by casting their skins, wherefore a medicine prepared of them by the Flame of Spirit of Wine renews man.

18. It is also to be observed that all Birds,

especially those that feed upon Flies and Worms, when they are sick, cure themselves by eating Spiders.

Secrets of Serpents.

19. All sorts of Serpents renovate themselves once a year by casting their skins, wherefore if we extract them with Spirit of Wine, and correct them by burning away the Spirit of Wine, they yield an assured medicine against all Poyson, and renews man.

20. *Regulus* of Antimony being duely fixed with *Sol*, tingeth as well in the wet as dry way.

Sol *and Sulphur yield a Tincture.*

21. Common combustible Sulphur cannot join with the incombustible Sulphur of *Sol*, without such a medium as partakes of both their Natures, *viz.* Antimony: when by this means the combustible Sulphur is fixed by the incombustible Sulphur of *Sol*, the *Sol* gives it ingress into imperfect metals to tinge them.

To make Sol *red.*

22. If the Blood of the Lion be digested with Tartar and *Aqua Fortis*, this purple Colour will be changed into a red, and separate it self from the Salt, falling in form of red powder to the bottom, and is a most excellent Colour for Painters.

To make Purpurissa*, or a Paint to make the Face look ruddy.*

23. Dissolve *Sol* and *Jupiter* in *Aqua Regis*, digest and edulcorate with Water, yields an excellent paint

for Women. *N. B.* But a little Oil of Talk ought to be added to it.

An Experiment upon Purpurissa *or the Blood of the Lyon.*

24. When we digest or boil the Blood of the Lion so long till the red Colour becomes as white as milk, and then pour upon it as much Water, as has been evaporated during the boiling, this milk will be chang'd again to Blood.

25. Of the blue Paint called Smalt, by means of Salt of Tartar may a most excellent Paint be made for Limners, not inferiour to Ultramarine.

26. Of *Mercury*, *Jupiter*, Sulphur and *Sal. Armoniack* is made the Paint called *Aurum Musicum*.

A Cementation that graduates Venus *into* Sol.

27. *Recipe* Vitriol calcined to Redness, mix it with Salt and Coal dust, lay this with thin Copper Plates *stratum super stratum*, put them into a Fire that may keep the Plates of *Venus* red hot for six hours without melting them, by which means the *Sol* in the *Venus* will be encreased; if we repeat this Cementation several times till the *Venus* be of a golden colour, the gain will be much greater. *N. B.* The cause of this melioration is, because the Coal Dust hinders the corrosive Spirits of the Vitriol and Salt from corroding the *Venus*, and therefore onely penetrates and graduates the same.

To make all Corrosives sweet.

28. Vitriol distilled with Salt yields a Corrosive Spirit, but if Coal Dust be mixed with them, they give a sweet Spirit, which graduates *Lune* into *Sol* when

digested therein.

29. *Recipe*, *Calx* of *Jupiter* mixed with *Mercury* of *Lune*, and therewith Cement plates of *Venus*, by which means the saline Spirits introduce the white Sulphur of *Jupiter* into the *Venus*, and change it into Lune containing much *Sol*.

A sweet graduating Spirit, usefull to the Melioration of Metals.

30. *Recipe*, Coal Dust, mix them with *Sal Mirabilis*, and distill by retort, and you will get a sweet graduating Spirit, exalting some Metals to *Sol*.

The Philosophical Work.

31. The Father of all things is the warm Son, their Mother is the moist Moon, the Earth is the Womb, the Wind carries the Seed through the Suns driving into the Womb the Earth, which foments, and at last brings forth the Child.

Sulphur is the Father of all Metals.

32. The Central Fire in the Earth mounts upward continually into the hollow places of the Earth, and meeting with water or moisture, cleaves to it and makes Stones, as also all Metals and Minerals of different natures and properties, according as the water is pure or impure.

Sulphur is the universal Coagulator.

33. A sulphureous vapour is that which coagulates Mercury, as well in Vegetables and Animals as Minerals.

Demogorgon the Grand-father of all things.

34. The Central Fire in the great World keeps it in continual motion, and causeth the growth of all things as well upon, as under the Earth, being the Governour of the great World.

The Vital Spirit, or radical moisture, is the Life and Growth of all Men.

35. As the great World is governed and maintained by the Demogorgon or Central Fire, so Man the little World is governed, and maintained in continual motion and growth, by the Vital Spirit seated in his heart.

36. Fire is the Father of all things, Water the Mother, the Earth is the Womb, the Wind or Air drives the Fire, being the universal Agent, into the Water, being the universal Patient, in order to bring forth Fruit. *See my Treatise of the divine Character.*

37. Man, Beasts, Fish and Fowl, and all that lives and grows, draw their life from the Air, onely the *Salamander* draws his life, and has his Body from the Fire, wherefore also in power and strength he excells all living Creatures.

38. The secret Fire of the *Chaldeans*, which at all times draws Fire out of the Air, wherewith the Jewish Priests kindled their Sacrifice, as may be seen in the *Maccabees*, is made of Steel, Niter and Sulphur.

39. When we abstract an *Aqua Regia* wherein Sol is dissolved from the Butter of Antimony, the Soul of *Sol* and Antimony comes Bloud-red over the helm, which poured upon a Solution of *Lune*, the *Lune* falls to the bottom, and draws the Tincture of *Sol* and Antimony to its self out of the Water, and the *Lune* by this means becomes red, and is a Tincture and Universal medicine for humane and metallick Bodies.

N. B. The remainder of the *Sol* and Antimony that did not come over is wholly fixt, and a good Diaphoretick, thus the Souls of the dead, *i. e.* of *Sol* and *Lune* are brought up from Hell. *See Nuisement de spiritu & sale Mundi.*

40. When in the manner now said with the Butter of Antimony, we bring over the Soul of *Mars* we get a much higher Tincture than from that of *Sol*, and in coming over becomes wholly fixt. *See my Treatise de 3 principiis Metallorum.*

41. In like manner may from the Butter of Arsenick and *Lune* a white Tincture be brought over the helm, tinging *Venus*, *Mars*, *Jupiter* and *Saturn* into *Lune*. *N. B.* These Tinctures in coming over are fixed by *Plato*'s Stygian Water, so as to need no further fixation.

42. But if we precipitate these Tinctures of *Mars* and Antimony with the Solution of *Sol*, and then edulcorate and dry the same, we by this means do obtain a dry graduating Water, which being molten with any white or red metals makes them yield good Gold, and *Lune* on the Cupel to the great profit of the Artist.

43. Oil of Vitriol mixed with *Sal Armoniack*, is also of good use to bring over Tinctures, but not in that quantity as Butter of Antimony.

44. Our dry, sweet universal tinging water dissolves white Pebbles and Crystals, and changeth the same into precious Stones of several colours, excepting onely their hardness, which it cannot communicate.

45. The easiest way to get the *Sol* or *Lune* that is in *Jupiter*, is by casting it upon molten *Venus*, which draws the *Sol* and *Lune* to it self out of the *Jupiter*.

46. In like manner doth the *Regulus* of Antimony when in flux readily draw to it the *Sol* and *Luna* in *Jupiter*, and then washing the *Regulus* with Niter we get the *Sol* and *Luna* contained in *Jupiter*.

47. But this operation ought not to be done in Crucibles made of common Earth, which easily break and spill the metal, but in those that are made of a fat crucible Clay, mix'd with coal dust, as is taught in the fifth part of my Furnaces.

48. As the Sulphur in Tartar coagulates a thin water into a hard Hepar, or Liver so called, so likewise doth a fixt Sulphur coagulate *Mercury* into *Sol* and *Luna*.

49. The often calcining of Salts and dissolving them in Water, doth purifie them, and makes them easily fluxible, and in particular Vitriol may by this means be so purified, as to yield its Oil with a very small heat.

50. The Solution of *Saturn* and *Lune* poured into a volatile Spirit of *Mars* or *Venus*, draws the tinging volatile Sulphur out of the Water to it self, and makes the same Corporal and fixed.

51. Tartar contains a coagulating and tinging Sulphur, for it coagulates Water into a Hepar, and tinges red metals to a white Stone, which may be pulverized; this Sulphur is the cause why Tartar will not dissolve in cold Water as other Salts.

52. When therefore the Tartar is freed of this Sulphur that coagulates all Water, then much good may be done therewith as well in Physick as Alchimy, and many other Arts besides.

53. Tartar by being boiled in a strong Lye, lets go its coagulating Sulphur, and a neutral Salt proceeds

from them both; but if we have a mind to separate the Lye from the purified Tartar we must do it with an acid, that may mortifie the Lye, by which means the purified Tartar will be left snow white.

54. If the Lye be kill'd with a Spirit of Niter or *Aqua Fortis*, then from both these contraries proceeds a good Niter.

55. But if we make use of a Spirit of Salt, then there is made up of both a tartarized Spirit of Salt.

56. If we take distill'd Vinegar to mortifie the Lye, then from the joyning of those both proceeds a neutral volatile Salt which is a good Diuretick in the Gout and Stone.

57. This is the best way of purifying Tartar, which after this Operation is of far greater use in Physick and Alchimy than the common Tartar.

58. Tartar as hath been said, contains a coagulating and tinging Sulphur, coagulating all Water into a thick Hepar, and exalting the Colours of metals. Thus we see that by boiling Golden or Silver Vessels with Tartar, their several Colours are exalted.

59. And whosoever has the Art of separating this Sulphur from Tartar, may by means thereof effect great and wonderfull things.

60. A like wonder working Sulphur is likewise found in Animals, and more especially in man, who brings it with him into the World.

61. Whence some Philosophers tell us, that *Adam* brought the Philosophers Stone with him out of Paradise, and after his death carried it with him into his grave.

62. Minerals also afford the same coagulating

fixing and tinging Sulphur, for which reason the Philosophers Stone is said to be Animal, Vegetable and Mineral, because of each of these three Kingdoms an Universal medicine may be made for men and metals.

63. But the easiest way is, when we extract the best part of all these three Kingdoms, and conjoyn them according to Art for an Universal medicine.

64. Wine is the chief of Vegetables, Man of Animals, and Gold of Metals.

65. Spirit of Wine purges and purifies all things, with its purifying Flame; as may be seen in my Purgatory of the Philosophers.

66. The volatile Salt of Animals, and especially of Man purifies all things by its volatilizing Virtue, as appears in our most secret *Sal Armoniack*.

67. The incombustible Sulphur of metals tingeth the Bodies of men and metals, to the highest pitch of Health, as may be seen in the third *Appendix* to the seventh part of my *Pharmacopœa Spagyrica*.

68. *Demogorgon* with his Russet mantle and green Coat, is the Grandfather of all the Heathen Gods *i. e.* of all metals.

69. And like as in the Earth he doth generate and bring to perfection all metals, so also out of the same, if the Artist knows how to manage him, he perfects all unripe and imperfect metals, in a short time, with the help of Fire, to that degree that they shall endure the Test as well as *Sol* or *Luna*.

70. This wonderfull virtue of fixing all volatile minerals, the Philosophers call their secret Fire or proper Agent, wherewith not onely the imperfect

metals, as *Saturn*, *Jupiter*, *Venus*, and *Mars*, but also volatile *Mercury*, combustible common Sulphur, Antimony, Orpiment, and Arsenick may be fixed, so as on the Cupel to leave *Sol* and *Lune*.

71. And as this Demogorgon, or invisible secret Fire of the wise Men, doth fix the unripe minerals and metals into *Lune* and *Sol*; so likewise can it fix the said minerals and metals, and exalt them to an higher degree than that of *Sol*, even to the *plusquam* perfection of true Tinctures, whereby all imperfect metals may be changed into *Sol*.

72. This our Demogorgon hath the virtue even as it comes raw and unprepared out of the Earth to change and meliorate all metals as follows.

73. It makes *Saturn* as hard and white as *Lune*, when tinged with it, of which all manner of Vessels and Dishes may be made, it onely wants the sound of *Lune* and enduring of the Test.

74. If a little of this Tincture be cast upon fluxed *Venus* it presently becomes white and hard as Steel, continues as fusible as before, and yet is so hard that it cannot be filed, so that several Vessels may be made of it, not subject to bending or breaking.

75. When cast upon melted *Jupiter*, it makes it hard as *Lune*, and sounding like it, is of great use to make all sorts of Vessels of.

76. And amongst other things that may be made of it with great profit, this is one, *viz.* that Looking-Glasses may be made thereof, which being polished continue a long time clear and fair, without being obscured in moist Weather, as other metalline Glasses are, and all this by reason of the extraordinary hardness of the metal. *See my Treatise of Looking-glasses.*

77. This Tincture cast upon *Lune*, makes the same Coal-black throughout, so that it is no more like *Lune*, of which Bells and Clocks may be made of a far better and clearer sound than those that are made of *Venus* and *Jupiter*.

78. By this means also in times of War, or other danger *Lune* may so be disguised as not to be known for such, and so may be a good way to preserve it from being taken by the Enemy.

79. In like manner it makes *Sol* so hard that it can no way be bent or destroyed, and therefore might be of good use in many of the following cases.

80. It would be very proper for some great Emperour or King to make his Statue of, it being indestructible, and not to be diminished or injur'd by any way whatsoever.

81. Money coin'd of this *Sol* would be of good use if a King or Prince had a mind that his Coin should not be transported elsewhere, because differing so much from common *Sol* it would not be passible in other Countries.

82. This golden Coin also would not be subject to be clipt or fil'd.

83. Medals also might be made of this *Sol*, and would be a great curiosity besides the indefectibleness of them.

84. It would be excellent also to make Rings of, especially such as are designed for the remembrance of Friends, as lasting for ever.

85. It would be very proper to cast Seals of, or the divine Character or other secret *Sigils*. *See my Treatise of the Divine Character and Seal of God.*

86. Or the said Divine Character being exprest upon my *Lapis Ignis* (which being but for a little while carried in ones mouth, cures many grievous Diseases without any other Medicine) might be set in this hard *Sol*, and so without wasting be carried constantly about one. *See my Treatise of the Mineral* Squilla *in order to a long life.*

87. Great Princes also might have Armour and Arms made of this hardned *Sol*, which would be much better than any of Iron or Steel, which easily take rust, to which *Sol* is not Subject.

88. Of this *Sol* might also very conveniently be made Candlesticks and Lamps, with other Vessels for the use of the Church and Altar.

89. To many more uses this *Sol* might be put, especially for that by reason of its hardness, it suffers it self to be polished to that degree, as to cast a great lustre from it, like the Sun.

90. As to the further use hereof, *See my Treatise* de tribus Lapidibus ignium secretorum.

91. With the hardned *Lune*, *Venus*, *Jupiter*, *Mars* and *Saturn*, many profitable and curious things may be done, which for brevitiy sake are here omitted.

92. The Sulphur of the Philosophers when set free from his dark Prison, wherein he is detain'd by his Brethren, by our Key that opens all Locks, gives his Deliverer for reward, the possession of the three Kingdoms in the World, *viz.* enabling him to make all Vegetables grow swiftly, and very fruitfull, to cure the Diseases of all Animals, and to meliorate and exalt all Metals.

93. And when the Philosophers, saith *Sendivogius*, see this Sulphur restor'd to liberty, swimming in

their Sea, they worship it, and draw it out with a Silver Line, though others do it with their *Sol* attracting Magnet, and fix it into an universal Medicine, wherewith they afterwards effect wonders: *As may be seen in my* Elias Artista*, and Purgatory of Philosophers*.

94. The Philosophers say, except first you make our *Sol* (that is, the redeemed Sulphur) and Mercury white, you'l never be able to make them red.

95. They say also, our *Sol* tingeth not except it be first tinged it self, that is exalted in its colour.

96. All things in the World have their rise from Fire and Water, and derive their Purity or Impurity, from the Purity or Impurity of their Parents.

97. The common Fire brings forth its Fruits very slowly, whether they be Stones, Minerals, Animals, or Vegetables.

98. And so do likewise the warm and dry Sun, and moist Earth: but when we assist Nature with Art, then she works much more swiftly, and brings her Fruits to maturity in much shorter time.

99. The Meteors in the Firmament which are made of Fire and Water, especially Thunder and Lightning, produce sometimes Stones, and cast them to the Earth.

100. A common fulminating Powder made of Sulphur, Niter and Tartar gives a stinking offensive smoak, corrupting some things, and meliorating others: whereas a Fulmen prepared of Niter, *Jupiter* and *Mercury*, yields a particular tinging mercurial Water. The Fulmen of *Venus* tinges *Mars* into Copper, that of *Lune* graduates *Venus* into *Lune*; and the Fulmen of *Sol* graduates and tinges *Mars* into *Sol*.

The universal Fulmen of the great Tincture graduates all Metals into *Sol*, which God of his mercy grant unto us, Amen.

THE FIFTH CENTURY.

The best particular and cheapest Universal.

1. When with the help of *Sendivogius* his *Chalybs*, or *Glauber*'s Magnet, we have extracted the colour from *Sol*, and again restored it through *Venus* and Antimony, we may by oft repeating the said extraction and restoration get great profit, this being one of the best particulars that can be. This multiplication of *Sol* may very well be compared with the generation of Man, for as a Man in generating, doth with meat and drink restore the loss of his Seed, by which means he continues the said multiplication for a long time, by turning the meat he eats into Prolifick Seed; so likewise the Chymist changeth *Venus*, *Mars*, *Jupiter*, *Saturn*, *Mercury* and *Lune* into *Sol*, by feeding the dis-spirited *Sol* that has lost its colour with them, restoring it to its former strength and vigour.

2. The Sperm of Man is not the Seed of Man, but onely the Shell and receptacle thereof, as may be seen in Old Men, whose Sperm is unfit for generation by reason of the weakness of their vital Spirit.

3. So likewise the Seeds of Vegetables, are not all pure Seed, but the House and Vehicle thereof, that is, of the growing and multiplying virtue, which appears in that when the Seeds have been kept so long till this vital virtue is exhaled from them, they never

bring forth any thing.

4. No more can *Sol* be said to be the Seed of metals, but onely the receptacle thereof, for the Seed is not the whole Body, but onely the lively colour of the Body, and the vegetative and multiplicative virtue that is hid in it.

5. Now as the Seed of Vegetables is more perfect and noble than the Vegetables, so likewise is mature fixt *Sol*, more perfect than *Mercury*, *Saturn*, *Jupiter*, *Venus*, *Mars*, though in the imperfect metals also a Seed be hid, but not so fixt and good as that in Gold.

6. The imperfect metals may be compared to an Herb, whose Seed is not yet ripe, which being put into the ground cannot grow or multiply, but rots in the Earth.

7. The virtue of Corals lies not in their whole Bodies, but in their colour; and therefore *Paracelsus* bids us not to make use of Corals in substance, but extract their Tincture, and use that for Physick, wherefore also he rejects white Corals, as being an unripe Fruit, from any use in Physick.

8. For this reason also the immature gray Pearls, which are frequently found in Cockle Shells in fresh running waters, are looked upon as useless in Physick.

9. And this not without reason, for as unripe Grapes are the cause of griping of the Guts, and hurt the Body; so ripe Grapes nourish and strengthen the same, especially when by fermentation they have quitted their Fæces.

10. All imperfect metals subvert and trouble the Stomach, and cause vomiting and purging, and that by reason of their unripeness.

11. Whereas on the contrary *Sol* taken into the Body causeth not the least alteration, but powerfully strengthens the same when reduc'd to Potability.

12. Thus *Sol* may be compared to ripe Grapes, which when eaten raw, do indeed no hurt to the Body, but rather affords some nourishment, yet cannot strengthen the Heart, Brain, and whole Body, and make a chearfull mind; but when by fermentation they are delivered from their skins and other impurities, they readily and as it were in a moment perform all this.

13. In like manner when *Sol* by fermentation hath laid aside his gross Body and become Spiritual, if then made use of, it not onely nourisheth as ripe Grapes, but exerts its virtue like a Spirit or Q. Essence of Wine, penetrating the whole, and making it lively, strong and vigorous throughout.

14. Neither do the other metals display their hidden virtue, untill by fermentation and distillation, they be subtilized and their gross Bodies laid aside.

15. Thus when *Lune* by fermentation and distillation is subtilized, then it draws away all Diseases of the Brain, and corroborates the same exceedingly even as *Sol* doth the Heart.

16. *Venus* so purified strengthens the Reins and procreative faculty.

17. The volatile sweet Spirit of *Mars*, removes all obstructions whatsoever, provokes the terms in Women, and opens the Hæmorroides in Men.

18. The sweet Spirit of *Saturn* cures all inward and outward hot Distempers.

19. The sweet Spirit of *Jupiter* cures all Distempers of the Lungs.

20. The volatile Spirit of *Mercury* cures the venereal Distemper.

21. *N. B.* These volatile spirits of metals must be cautiously used, as being of very great force.

22. The manner of preparing them, may be seen in my Book of Fires, but most plainly set down in my description of the most secret *Sal Armoniack*.

23. All Spirits act according to their nature and property either good or ill, as the Bodies are good or evil from whence they are taken.

24. *The Spirit quickens, the Body or Flesh profits nothing, saith Christ*, John 6.

25. These words are ill interpreted, when understood by some, as if Spirits onely were of use, and Bodies not at all, which is a great mistake, as it is applied by some.

26. Indeed in Metals, Vegetables and all Animals without the use of reason, who grow, move, and live, by the driving of their in-born Spirit, it does hold true, for when their Spirits are by Art separated from their Bodies, the said Bodies are thenceforward of no use, as being upon the separation of their Spirit, dead and without all virtue.

27. But the case is different with Man, who being created in the Image of God, and endowed besides his Animal Spirit, with an immortal Soul, which latter onely and immediately derives from God, and not from nature, as the mortal Spirits of Animals do.

28. Wherefore *Pythagoras* was much mistaken, in believing that the immortal Souls of Men, when departed from their Bodies did immediately enter into those of Beasts.

29. Which mistake of his seems to have been occasioned hence, because he knew how by Art to take away the Soul, *i. e.* Tincture from *Sol*, and transfer the same to an imperfect metal, thereby making the same in all things like to true natural *Sol*.

30. Certain it is that this may be done by art, for the fixt Body of *Sol* may be destroyed, its Soul extracted, and by being joyn'd to another metal make it good *Sol*.

31. When this disanimation of *Sol* is duely performed, the Body is left wholly dead, and is in all things like a volatile unmalleable mineral, and cannot endure the test, but fumes away like Arsenick with a little Fire.

32. But in case this disanimating of *Sol* be not rightly done, so that the Body continues as white as *Lune*, and malleable (which is a sign that some life is still left in it) then his Colour may be restored again by means of imperfect minerals, as well as his former fixedness in the Fire.

33. But when the Body of *Sol* will no longer endure the fire, but goes away in smoak, then we can say it is truly dead and no more *Sol*.

34. He that finds difficulty to believe this, let him reade *Paracelsus*, *Sendivogius* and other Philosophers.

35. *Sendivogius* saith, *Our Steel,* that is, our Magnet, *can draw from the Rayes of the Sun, what many have sought for and not found; if this our Magnet copulate eleven times with* Sol, *the* Sol *becomes weakned almost to death, and the Steel or Magnet shall conceive and bring forth a Son more illustrious than his Father.*

36. From which words it appears that *Sendivogius* had the Art to disanimate *Sol*, else could never have

writ so plainly concerning it.

37. It is certain also that there are some, that at this time can do as much within a few hours, I having lately been an Eye-witness of the same, with three other persons in company.

38. It is not necessary to say any more how this cheap and speedy way of disanimating *Sol* is to be performed; forasmuch as all the Philosophers writings are full of it.

39. However to pleasure the unskilfull I will add thus much, that this may be done four several ways.

40. But the easiest and cheapest way is by means of Spirit of Wine, and a microcosmical saline Spirit; yea this extraction may be performed by a Spirit of Wine alone, without any animal Spirit, or by an animal saline Spirit without the Spirit of Wine.

41. If this were not so, we might have reason to accuse both ancient and modern Philosophers of falshood, who tells us that *Adam* brought the Philosophers Stone with him out of Paradise, and after his death took it with him into his Grave.

42. Which words may seem strange to some, forasmuch as he was driven bare and naked out of Paradise.

43. Yet the Authority of those who assert this being so great and incontestable, it cannot well be called in question.

44. What therefore the Philosophers meant by this Stone which *Adam* brought with him out of Paradise, is well worthy our Enquiry.

45. The Philosophers commonly say our stone is a stone and nostone, *&c.* which implies thus much, that

to outward view it is a stone, but in deed and in vertue, a Concentrate form of *Sol*.

46. Wherefore *Petrus Bonus* saith, *We do not seek* Sol*, but the form of* Sol.

47. What is then properly this form of *Sol*?

48. *Answ.* It is a substance which to outward view looks like a contemptible stone, and yet is of such superlative Vertue, that when joyned with imperfect metals on the Fire, it transmutes them into the highest perfection of *Sol*.

49. It may further be demanded, whether *Adam* brought such a matter with him out of Paradise, whereby this transmutation of metals into *Sol* may be performed?

50. *Ans.* Yes he did bring such a matter with him out of Paradise, and after death took it with him to his Grave, wherewith all Diseases of mankind may be cured, and all metals changed into the finest *Sol*.

51. If this be so, might some say, *Adam* must either have been very blind, in not discerning the Treasure he was possessed of; or very envious in not communicating the same to his Posterity.

52. I cannot believe that *Adam*, out of envy withheld this secret from his Children, but rather suppose that the blindness into which his fall had cast him, was the cause of his not percieving the great Jewel he had about him.

53. But how could he be blind, who was made by God himself, and after his own Image?

54. *Adam* was certainly blind, and his blindness proceeded from his Pride, because he aspired to be like to God; he was not blind as to his outward Eyes,

but his heart was blinded, which is by far the worst blindness of the two: For all sin and wickedness blinds the hearts of men, that they cannot percieve the folly of their doings.

55. Thus *Adam* also by means of his disobedience to God, became so blind, as not to percieve, or be sensible of the Love that God had for him before his Fall, and how richly he had endowed him.

56. Whence also his Children were so wicked and blind, that the one Brother slew the other; which wickedness hath still encreased in their Posterity, as appears by the deluge, and the destruction of *Sodom* and *Gomorrah*.

57. And thus the World from day to day still grows worse and worse, notwithstanding the Examples of God's Vengeance against Sinners.

58. And all this proceeds because men are so generally blinded by the Devil in sin and wickedness.

59. But to leave this, it may be further question'd; that seeing all mankind is become so blinded through *Adam*'s fall, as not to discern the Jewel they carry about them; who then was the Person that first discovered, that man was the Possessour of so great a Treasure?

60. *Ans.* Who was the first discoverer of this Treasure I cannot tell, but thus much is certain, that it was an honest man and fearing God; because God doth not reveal his secrets to the wicked; wherefore *Tho. Aquinas* saith, *Our Holy Art, either finds a man holy, or makes him so*.

61. But some will say, don't we reade of Heathens that have been Possessours of the Philosophers stone; and how can we imagine that those who have no

knowledge of God, and are blinded with sin, should ever be able to find out So great a Mystery?

62. *Ans.* Those Heathens that have been Possessours of this great secret, were not without the knowledge of God; for they lived according to the Law of Nature, honouring God and loving their Neighbour; wherefore also God accepted of them. They learnt to know God from his Works of Wonder, and according to their knowledge, loved, honoured and feared him; and so were made Partakers of his grace, light, and the knowledge of his secrets.

63. We are also to know that the Ancient Philosophers know more than one way to attain the Philosophers Stone; though indeed the most of them sought it in minerals and metals, which is the longest way.

64. And that because it is impossible to change the metallick species, without bringing metals back into their first matter. *See my Treatise of the principles of metals, and the seventh part of my* Pharmacopœa Spagyrica.

65. But others have taken a nearer way to attain this secret; and to some Christians God hath been pleased to discover the shortest way of all, by revealing unto them that he made *Adam* every way perfect, giving him all that was necessary, either for his Soul or Body.

66. Now that *Adam* could not discern how richly God had endowed him, was his own fault, because he was disobedient to God, following the deceitfull Serpents advice.

67. And after this manner doth the Devil yet daily deceive Men, by perswading them to do against the commands of God, and that their disobedience shall

not bring any such mischief upon them as God's threatnings seem to import.

68. This then is the reason why Men do not understand the secrets of God, because they give too much way to Sin, whereby they become blinded, that they can neither see nor hear the good that comes from above.

69. Now the reason why most of the Alchymists have sought for this great gift of God in minerals and metals, and especially in *Sol*, is this, because their intention was to multiply *Sol*, which they supposed could no way better be done than by sowing it like other Seeds in the Earth, but could not imagine that besides common *Sol*, there were other subjects, wherein the *Sol*-making virtue did reside.

70. Which opinion of theirs was probably grounded upon that saying of the Philosophers. *What you sow, that you will reap.*

71. This seems at first sight very rational, that from filth or excrements no good, and so no *Sol* can come; but let us hear the other side also, and we shall be otherwise informed.

72. For the Philosophers say that their Medicine is Vegetable, Animal and Mineral; so that Vegetables and Animals are not excepted.

73. *Albertus Magnus*, writes that the greatest mineral aurifying virtue is in Man, and especially in his Head between the Teeth, and proves it; because in dead Men's Skuls he had found grains of *Sol* sticking between the Teeth.

74. The same is also confirmed by *Thomas Aquinas*, *Rhasis*, *Janus Lacinius*, and others.

75. There is also an old Book, whose Authour is

unknown, which treats at large of that subject which *Adam* brought with him out of *Paradise*, wherein the Operator is warned to have a great care of the fumes of the matter as he would avoid the Plague, or the most deadly Poyson. From this Authour I have alledged some passages in my other Writings, and shewed that the Philosophers Stone may be prepared of any subject whose Elements may be separated.

76. Now certain it is that from all Animals and Vegetables, the Elements may be separated, and consequently follows, that from all Vegetable and Animal Subjects, the Philosophers Stone, or universal Medicine for the Bodies of Men, and Metals may be prepared.

77. *Morienus Romanus*, who prepared this Medicine for King *Calid*, declares that he took the subject matter of it from Man.

78. For when the King asked *Morienus*, in what kind of subject the Philosophers Stone was to be lookt for; he answered, the Medicine is in thy self O King; wherefore also after that he had finished the Work, he wrote round about the Glass, in which the Medicine was, these words: *He who carries all about him, needs not the help of another*.

79. Thereby intimating, that he always carried about with him, whatsoever was necessary for the preparing of the Medicine, and therefore did not stand in need of the King's assistance.

80. This same honest *Morienus*, writes plainly concerning the preparation of this Medicine, and doth as it were with his finger point us to the matter, in these words of his, quoted by *Arnoldus de villa nova*; *Grind the Phlegmatick and Cholerick with the Sanguin, untill it become a tinging Heaven*, &c.

81. *Arnoldus* explains these words of *Morienus* thus: *The Phlegmatick is cold, as* Mercury*, the Sanguin is warm and moist, as the* Sol *or* Gold*, the Cholerick is hot and dry, as* Sal Armoniack: intimating that of these three, *Mercury*, *Sol*, and *Sal Armoniac*, the Philosophers Stone is to be prepared.

82. But that he meant not this concerning common *Mercury*, *Sol*, and *Sal Armoniack* is apparent from this, that *Morienus*, as soon as he had prepared the Medicine for the King, went away privately, without expecting any reward from the King; it also appears from the answer before mentioned, which he made to the King, that he spoke of such a *Mercury*, *Sol*, and *Sal Armoniack* which every Man carries about with him.

83. This is abundantly confirmed by all the Philosophers that went his way, forasmuch as they declare that no charges are required to the preparation of it, that their subject is a contemptible matter cast out upon Dunghills, and trod under feet, and that the Poor have it as well as the Rich.

84. *Morienus* yet more clearly intimates this, in telling us that the matter whilst it is preparing, exhales a smell like to that which comes from the Graves of the Dead, which is a very offensive smell.

85. Now like as Vegetables whilst they are putrifying give forth an ill scent, and Animals a worse, as appears in the stink of rotten Eggs, and the putrefaction of Man's Blood, especially when the same are putrified in a close Glass in warm Horse Dung.

86. For without putrefaction, there can be no separation of the Elements by Distilation, and if no separation be made, neither can any melioration or

exaltation be expected.

87. We know that every *Chaos*, as it is a product of the four Elements, contains many impurities, and in particular much dead Earth, and Water void of all virtue; and that the Element of Fire alone is proper to heal and meliorate Men and Metals.

88. Wherefore seeing that no separation of the Elements can be without a foregoing putrefaction we must conclude putrefaction to be the beginning of our Work, without which no good end can be expected.

89. Now he that knows our Horse Dung, and how to putrifie the well known and every where to be found most universal natural subject by means of the same, he will easily afterwards by Distillation separate the most pure and all things penetrating and meliorating Element of Fire, from the gross Chaos to his great satisfaction, and make use of the same to the astonishment and wonder of the ignorant.

90. But in this state it is onely good for the health of Man; and therefore in order to its meliorating of Metals, the pure Element of Fire must be first fix'd with *Sol*, by which means it obtains ingress into imperfect Metals, reducing them to the perfection of *Sol*.

91. Now when the pure Element of Fire is separated from the Chaos, and reduced to the highest degree of purity, then it stinks no more, neither is poisonous as it was before purification, but is an Antidote against all poisons whatsoever, wherefore also the Philosophers have called their Medicine *Theriaca*.

92. But all this is to be understood onely of that subject which every man carries about with him, and

brings with him out of his Mothers Womb.

93. If any one following the Letter of *Morienus*, should take for his subject common *Mercury*, *Sol* and *Sal Armoniack*, neither will he be mistaken, but if he rightly proceeds will have a good Work, though it be not at all necessary to make use of common *Sol* and *Mercury*, because our natural subject contains both a living *Sol* and *Mercury*.

94. It is no prejudice to our Animal Subject, if we join Minerals with it, because our *Sol* joins it self with all subjects, and unites it self readily with them. But if we be ignorant of the due proportion and composition of *Sol*, *Mercury*, Sulphur, or any other metal or mineral, then it is better to prepare our Medicine out of this one subject onely, because so there is less danger of erring, as I can witness by experience.

95. I have also found by experience that this Microcosmical Subject is alone sufficient, without the addition of any minerals or metals, to meliorate all imperfect metals.

96. As to a particular this of all others hath pleas'd me best, *viz. Recipe* common *Sol*, and with the help of our Magnet disanimate it so, that it may be no longer *Sol*, as not enduring the Test, and smoaking away with a small Fire like Arsenick.

97. Then take this *Sol* and conjoyn it with our Microcosmical Subject, with which digest a solution of Lune, by which means the *Lune* will be meliorated, and on the Cupel leave *Sol* to good profit.

98. But if we joyn common *Mercury* and common *Sol* with it, and cast this mixture into a solution of *Mars*, and digest it for some days then the pure *Sol* and easily flowing *Mercury* graduates a good part of

the gross and difficultly flowing *Mars* into good *Sol*, to the great satisfaction of the Artist.

99. And if we unite *Lune* and *Jupiter* therewith, and cast this mixture into a solution of *Venus*, and digest it the moist way, then by means of our secret Salt these two white united metals change the red *Venus* with little loss of weight into good *Lune* that will abide the Test. And it is indeed matter of wonder, that our universal Salt, should be of so great virtue, when fermented with white or red metals, to change other imperfect metals into good *Sol* and *Lune* on the Test.

100. Wherefore this shall be my conclusion, that in Man is hid the greatest virtue of changing all metals, as well as the Bodies of Men, both universally, and particularly; which if intended for the melioration of metals, the adding of fixt *Sol* and *Lune* for a ferment will facilitate the ingress into other metals, and further diffuse its tinging virtue.

N. B. I shall not be satisfied till I have given a fuller and plainer description of this Royal Labour, which I intend to do in the sixth Century, if God permit.

Novum Lumen Chymicum:
OR A
NEW CHYMICAL LIGHT.

Being a Revelation of a certain new invented secret, never before manifested to the World.

Whereby a clear and unextinguishable light is set before the Eyes of the blind World, and, as it were, palpably demonstrated, that good Gold may be found and attained with profit, every where throughout the whole World, as well in cold as in hot Regions, so that in all those places, where Sand and Stones are found, a Man cannot set his Foot, where, not onely Gold, but also the true matter of the Stone of Philosophers is afforded.

READER,

I will now address my self to the discovering of the wonders of God, not hitherto heard of; to wit, that throughout the whole Earth, no less in cold than in hot Countries, where there are Sand and Stones to be had, good Gold may be extracted from thence with profit.

Because a Man cannot set his foot in any place where Gold doth not exist. Nevertheless Chalk, or Lime-Stones, are to be thence excepted; because they onely seldom or never contain any thing of Gold, otherwise all sandy and rocky Stones, all Flints of what colour soever, as also all Sand, fine and course, all sandy Stones upon high Mountains, in deep Valleys, in the bowels of the Earth, in Ponds and Rivers, and lastly, all the Sand on the Sea-shore, none excepted, although it hath as yet obtained no colour, but be white and clear. The which indeed will seem incredible to very many, but is asserted by me as a sincere truth, which I never found, by reading or hearsay, but have proved by many and various experiments. Some of which I will here set down for the confirming and demonstrating the truth of my Writings, that by those, all Men of a sound mind may be able to discern, that my Assertion is no Dream, nor fabulous trifle, but sufficiently founded upon experience in the light of nature.

Therefore I would not have thee judge of those things which thou understandest not, nor canst not at present apprehend, but remember that the wonders of God triumph with magnificence and power. But search out those things in every part before thou presumest to interpose thy immature judgment. And although in the proof thou shouldst be mistaken as may easily happen to one making tryal, yet do not impute the errour to my Writings, but rather to thy own unready Wit. For I will here write nothing but what I have oftentimes performed, and can yet perform at any time. Consult other searchers after this matter, among which I think all cannot err, in a matter so easie, that even a Boy of ten years of Age may apprehend it, for what belongs to the possibility of it, but it will be evident to many of them with me, That there is Gold in all Sand and Stones*, through all places of the* World. *But there is no need that I should here*

shew the way of extracting it from them, in a great quantity or large use, but rather I shall beware, that I put not so sharp a Dart into the hands of my Adversaries, to wound my self, for I have published this to gratifie candid Friends, not Counterfeits, but least of all the Compilers of notorious Libels, in which opinion, I will remain and acquiesce.

We will now proceed to the Trial whether those things which I have here written be true, and are able to abide the Examen of the Cupel, to wit, that in all Sand, there is good Gold.

The first Specimen of Probation.

Recipe one Ounce of white Sand or Flint, which you esteem to be altogether void of Gold, with which mix three parts of *Minium*, or of any other Ashes of *Saturn*. Put this mixture into a Wind Furnace, or to the Bellows, let it flow well together for an hour, and it will turn to a yellow glass; suffer it not to stand too long lest the glass of *Saturn* perforate the Crucible, and run out into the Ashes. Pour out the glass and powder it, and mix it with half its weight of *Sal Alcali* or Pot ashes, put this mixture into an Iron Crucible, into which you have first put some bits of Iron, or old Nails; give fire and cause the matter to flow, and the glass of *Saturn* will be continually reduced by the *Mars*, and at length return into Lead: Pour it out into a Cone, and the *Regulus* of *Saturn* will sink to the bottom, and the Sand or Flint will be uppermost as a dross. After all is cold, take out the *Regulus* of *Saturn*, which hath drawn to it self so great a roughness and blackness from the Iron, that it cannot easily be cupellated: which you may remedy thus: put this black *Regulus* of *Saturn* into a Crucible in a Wind Furnace, cause it to flow well; and if there

be of that one Ounce, cast upon it a Drachm or somewhat more of Salt-peter, and make them flow together, then the Salt-peter will attract the roughness from the *Saturn* and turn it into *Scoria*. Which being poured out and the *Regulus* of *Saturn* separated from the *Scoria*, it will be white and tractable, and easily runneth upon the Cupel. This I call washing. But if thou knowest not how to perform this Lotion, which yet in it self consisteth in an easie labour, put thy black and rough *Regulus* of *Saturn* into such an Instrument (as they call Treib Scherbe) or, a close Cupel, under a covering [or Muffle,] and suffer it so to be defecated for the space of half or at least a quarter of an hour, pour it out and separate the *Scoria* from the *Regulus*; which will be white and tractable. But the Lotion by Salt-peter is much the better.

Of this *Regulus* of *Saturn*, and of that same Lead of which the Ashes of *Saturn* were made, take equally the same weight, exactly weighed with the lesser weights, put each of them apart upon a dephlegmed Cupel, suffer them to run; compare one with the other, and you shall find, that *Saturn* which was blown off with the Sand or Flint to leave behind it a grain of Gold, but on the contrary, the common *Saturn* will onely leave a grain of Silver. Who now can deny, but that the grain of Gold proceedeth from the white Sand or Flint? For no Gold could come from the Salts. This Specimen of Probation is a palpable Argument, that Gold is contained in all Sand and Flints of what Colour soever. But that there is no difference between one Sand or Flint, and another, so that there is no more Gold in one than another, I do not assert, for (in that respect) they greatly differ. Also that the Sand of hot Regions containeth more Gold than that of cold Countreys, is

in no wise to be doubted, as every prudent Man will easily think. For we have let down this Specimen of Probation, onely to the end that you may find Gold to be in all the Sand and Flints of the whole World.

The second Specimen of Probation.

Recipe one part of white Flint or Sand, with which mix three or four times as much Salt of Tartar, or of any other Alcaly, which mixture put into a Crucible, so that it be not above a third part full, because this mixture in the melting might rise up and run over the Crucible; let it stand half an hour, that it may be well melted, and it will be turned into a white transparent glass. Pour it out and dissolve it in water, or rather in a *Lixivium*, and the Sand or Flint will be dissolved, and converted into a thick Liquor. In this Liquor digest for the space of an hour or two, half an Ounce of Filings or Raspings or rather thin shavings of Lead, and the Lead will extract the spiritual Gold from the Water of Flints, and will thence grow yellow: Which being taken out of the Water dry, cupel it, and you shall find a grain of Gold. Also cupel another half Ounce of the same Lead, and you shall find a grain of Silver, as is commonly wont to be had from all Lead, from which you may be certain that white Flints and Sand, contain spiritual Gold, which becometh corporeal with Metals.

A Third Specimen of Probation.

Dissolve *Saturn* in *Áqua Fortis*, and pour into the solution Salt water, and all the Lead will fall from the Water like a white Powder: mix three parts of this edulcorated and dryed *Calx* of *Saturn* with one part of Sand, to which add half so much of the Salt of a *Lixivium* or other Alcaly; which mixture put into an

Iron Crucible, into which you have first put some bits of Iron, which being covered, suffer it to melt for the space of full half an hour, untill the sharp Spirits of Salt which were in the Lead be mortified by the Iron, for then the *Saturn* is reduced and rendered corporeal, which being poured out into a Cone, the *Regulus* of *Saturn* falleth to the bottom, which you may wash with Salt-peter as we have taught above, or purge it from the Fæces on the Treib Scherbe [or Muffle] weigh it exactly by the lesser Probatory Weights, weigh also as much of any other common Lead, which is not melted with Sand, cupel each by it self, and that Lead which was melted with the Sand, will leave a grain of Gold in the Cupel, but the other common Lead leaveth onely a grain of Silver. Which sufficiently proveth that there is Gold in all Sand, none excepted. But I do not assert that all Sand containeth so much Gold as that it may be thence extracted with profit. Because some Sand is poor, other rich, another richer. Therefore whosoever intendeth any profit by this ought before hand to know the difference of Sand and Stones, that he may not lose his labour. The which may easily be found out by experience, to wit, if you do nothing in great Quantities, before you have made trial in lesser, that is, such as may be performed by the lesser Specimens of Probation.

A Legitimate and Infallible way and manner of finding out and proving every Flint, Stone, and Sand, whether it containeth much or little Gold.

Recipe four ounces of Sand, Flint, or other Stones or Rocks, which you have a mind to prove; heat them red hot in a Crucible, and cast them so into cold Water, where they will become tractable, and may easily be brought to fine Powder, to those four

ounces of powdered Flints, Sand or Stones, put into a small Glass Cucurbit, pour two ounces of *Aq. Regis*, that the Sand may be well moistned; set the Cucurbit upon warm Sand for half an hour, and the Aqua Regis will attract to it self the Gold which is contained in the Sand or Flint. To which if two ounces of hot Water be poured into the Cucurbit, and mixed by a strong shaking it together, and filtred through a brown Paper, the Water with the Gold goeth through the filter, and the Sand will remain in the Paper, to which if you pour a little common Water, and let it run through it will take out the residue of the Gold, which yet adhereth to the Sand, which is to be added to the first. Upon this Solution if you pour a *Lixivium*, but rather Spirit of Urine; that *Lixivium* or Spirit of Urine, mortifieth the *Aqua Regis* and precipitateth the Gold which is in it in form of a yellow Powder, from which the Water is to be poured off, and the Sol to be edulcorated with fresh Water, and dryed, and that very warily, because Gold of this sort, when it groweth hot, fulminateth, so that it is shattered into minute parts. To this fulminating Gold if you add a little common Sulphur, and make it red hot in a Crucible, it doth not fulminate. If you reduce such a *Calx* of Gold mixed with Borax in a clean Crucible, you will find how much Gold that four Ounces of Sand or Flint contained. *N. B.* Except the Sand or Flint should happen also to be impregnated with Iron, which would render the *Sol* brittle and pale. For in that case, the *Sol* precipitated from the *Aqua Regia*, and burned with Sulphur would not flow with Borax, because the Iron being mixed with it, would adulterate the Probation: But if you cupel such Gold partaking of Iron, with *Saturn*, the Iron may be separated from the *Sol*, and the proof will be void of errour. *N. B.* That Sand and Flints,

may indeed be proved another way, but seeing this which we have here prescribed, is easie to be practised, we will rest in that.

But this one thing is also necessary to be known, *viz.* It is indeed true, that in all Sand and Flints there is Gold, as the above mentioned proofs do witness; nevertheless know that there is a difference between native, corporeal, and solid Gold, and the volatile spiritual first Ens of Gold. For the corporeal Gold is easily extracted by the help of corrosive Waters or Salts; but the spiritual not so. And because corporeal Gold is always elicited by the benefit of the above mentioned Probation it may thence happen, that although in white Sand there should plainly be no corporeal Gold, nevertheless by the help of the aforesaid Probations it would be thence elicited, indeed not much, nor no more than what the Lead which was used for the proof, did contain of Silver: because the *Lune* in the melting or dissolving hath attracted to it self the spiritual Gold, from the Flint or Sand, so that it is thence tincted and transmuted into Gold. Which is manifest in that the grain of *Sol* doth not exceed the magnitude of the grain of Silver, which is gotten from other common Lead. But if besides the spiritual, there be also corporeal Gold in the Sand, the grain of *Sol* will necessarily exceed that of *Luna*, for the Silver which was contained in the *Saturn* doth not vanish into Air but remaineth and because it doth not remain the same Silver but passeth into Gold, that change is ascribed to the notable Operation of the first Ens of Gold or spiritual Gold in the Sand. Wherefore who soever intendeth to extract Gold from Sand, Flint or Stones with profit, ought to know certainly before by smaller experiments, that besides spiritual, they also contain corporal Gold. For I have written this Book onely

upon the account of extracting from them corporal Gold, leaving the spiritual Gold to Philosophers that of it they may make their Stone. But necessity required that I should lightly touch at those few things. For if according to my prescribed Probations, any one in working should have found a grain of Gold of equal quantity with the grain of Silver, he might wonder in his mind, which way the Silver had made its escape, seeing that he had found Gold instead of Silver. Wherefore I thought it necessary to shew the reason of that, for the taking away all scruple from every ignorant mind. Wherefore whosoever seeketh Gold from Sand or Stones, let him chuse such, from which corporal Gold may be extracted with profit. For they will afford him such profitable fruit, as the white Sand denieth. But that for the performing my Specimens of Probation, I have taught to take white Sand, I have done it for this reason, that I might make it evident to every one that there is Gold in all Sand, but that it cannot be extracted from all with gain. For white Sand or Flint is very often void of corporal Gold, but never of spiritual, by which Silver may be converted into good Gold. I might have passed by this admonition with silence, seeing that those things are not necessary to be known by the vulgar, in asmuch as corporal Gold will abundantly satisfy their desire; but a Philosopher neither wanteth, nor seeketh corporal Gold, but onely spiritual, to prepare of it a Tincture. Add, that to him it is sufficiently known, in what subjects the first Ens of Gold is plentifully contained. Hence, although the first Ens of Gold be also in white Sand, as is manifest by the foregoing proofs, he useth not that, but rather seeketh such Stones for his work, as contain much Tincture. Neither also doth any true Philosopher so tie himself

to this or that subject onely, that he will not elicit his Tincture from any other, inasmuch as it is evident to him that the first Ens of Gold may be found in all things in the whole World. For wheresoever there is Sulphur, there may also be had the first Ens of Gold, whence a Tincture may be prepared. But it is evident that in all Vegetables, Animals and Minerals there is Sulphur. For the matter of the Stone of Philosophers, every where offereth it self, so that the poor as well as the rich may attain it without cost, according to that saying of the Philosopher; *That their matter is every where obvious, and prepared without money, trod under foot and thrown to Dunghils*. So the true Philosophers speak and write. But Sophisters, who falsly assume the name of Philosophers, wandring up and down from Court to Court, where they offer their service for the acquiring the Philosophers Stone, by their lying Fables, perswade credulous Noble men, that the matter of the Stone is to be sought in this or that place or mountain, as in *Hungary*, *Transylvania*, the Forrest of *Hercynia*, *Thuringia* or *Bohemia*, or in the Rocks of *Sueden* or *Norway*, and elsewhere. Others again perswade credulous Persons, that the Stone of Philosophers, can be made of nothing but common Gold, and therefore require of their Patrons not onely some ounces, but some pounds of Gold, for their own greater profit. One of those Pseudo-philosophers was lately here at *Amsterdam*, who by perswading certain Merchants, trickt them out of two and twenty Marks of Gold, thence to make the Philosophers Stone. He indeed put the Gold into the Vessel according to his own manner, before those Merchants, giving to it a continuall Fire. But after much time being elapsed, when they expected to reap the Fruit, he, who had plaid the Philosopher, privately withdrew himself

into I know not what Countrey, and would not return to take out the two and twenty marks of gold. Therefore the Merchants themselves being about to take them out, found those solar Birds were flown, and had left onely the empty nest. Which empty nest as yet lies in a place in this City, nor doth any one know how to convert it to his own use. But if the Merchant had given to that impostor in hand, onely two, or at the most three ounces of gold, they had not received so great a loss. But as they unadvisedly credited his fine Clothes, and his finer words, so they were intollerably deceived.

A true Philosopher wanteth not so much gold for his Medicine, inasmuch as if he bringeth but one half ounce to perfection, it may suffice for his whole life, and may be in his own power to do the same again as often as necessity shall require, so that he will have no need to run up and down from one to another who are greedy of gold, to blemish the noble art of Chymistry, and bring it into hatred with the whole World.

Some years since, when I had written of the Prosperity of *Germany*, and from a good intention had taught *how Wine and Corn might be concentrated, and in case of necessity, might be commodiously carried from one Countrey to another, and there safely kept in Garrisons or Fortresses for future use*; fearing that at sometime while the Shepherd slept, that most ravenous Wolf the *Turk* might break into the *German* Fold, and cut the throats of what Sheep he could not carry away. Against which, *Farner* with his accomplices, hath set forth notorious Libels, and hath every where traduced me for a false Prophet: Whose Calumnies I have not opposed, because he hath sheltred himself under the protection of Princes.

Moreover, this *Farner*, with a consort of ruiners of fame, or good name, have reproachfully wounded my Honour, by falsely accusing my Writings, and traducing them for Lyes: And seeing that almost all of them abide in great Men's Courts, and have not put their names to their invective Papers, I have not indeed been able to reach them. But yet at length those Men of darkness, who have concealed their names, that they might give the greater reputation to their slanderous Papers, do come to be more and more known to me. Besides at last the event hath shewed those things to be true, which I had predicted should happen; to wit, that the depraved Christians should be chastised by the *Turks* and *Tartars*. But it is to be pitied that also Men of better note, should be ensnared and captivated by the common judgment, by reason of that Company of the Devils attendants. For the unerring truth declareth, that the righteous scourge of God, will not be taken away from us, before such spoils of a Man's good name be restrained by the Magistrate.

Now, to return to our purpose, to demonstrate, that not onely Gold, but also somewhat more rare; to wit, a true Tincture is hidden in Stones, and by the help of Art may be extracted from them, which the Ancients have hinted at in these words: *Auro quid Melius? Jaspis*, &c. And that there is much Tincture contained in the Jasper, I have long since inculcated in other places of my Writings. *Paracelsus* highly commendeth *Red Talck*, *Granates*, *Antimony*, and *Lapis Lazuli*, adding that Tinctures or the first Ens of Gold, may be gotten from them by the help of sublimation. Moreover the first Ens of Gold, may also be found in other Stones, especially in the *Hematitis*, *Scythis*, *Magnesia* of *Piedmont*, *Smiris*, and others of that kind, in which it is so fixed, that there is nothing

wanting to obtain it but onely the way of extracting, and giving it ingress by *Sol*. On the contrary, the first Ens of Gold is indeed in Vegetable, Animal, and Mineral Sulphur, Marcasites, and Antimony, and that abundantly, but so volatile that Stones are to be preferred to them.

And although my intention in this Book extendeth no farther than the extracting of Gold out of Stones, Sand, and Flints, yet nothing hinders but that in a few words, I may also shew, that in Stones, there is not onely fixed Gold, but also volatile, whence a true Tincture may be perfected. Which Tincture I have not as yet made, but nevertheless I am certainly perswaded that it is in no wise impossible to be done. For whosoever can render the first Ens of Gold, in Stones, volatile, and draw it out by Distillation, he will continually obtain a gradatory water, whereby he may coagulate every running Mercury into good Gold. But he that knoweth how to joyn this volatile Gold with corporal *Sol*, to unite them and procure ingress, may thence expect a far greater good. For the first Ens of Gold is more conducible for the preparing Tinctures, than corporal Gold, as one of the Philosophers hath signified in the following words: *Thou canst not make Gold or Silver, except thou shalt obtain their first Ens*. The first Ens of Gold, which is hidden in all Vegetables and Animals, coagulateth Mercury also into a yellowness, but not constant; but if it shall be fixed, it also coagulateth and fixeth with constancy, but not before. Therefore it is most certainly true, that where Sulphur is, there is also the first Ens of Gold; and where there is the first Ens of Gold, there is also Tincture. Therefore seeing that Sulphur may be found, in all things in the World, even in the smallest Herb, it followeth that also from every Herb, Wood, Stone, or Bone, a true Tincture

may be prepared. Whosoever will believe, let him, it matters little to me whether it be believed or not, I think my self satisfied in that I have not put that light which I have received under a Bushel, but have exhibited it to the World for information. For the light conduceth nothing to him who is blind, and resolveth to remain so. You shall find more in my third Century, as also in the sixth part of my *Pharmacopœa Spagyrica*.

How it may be known whether Sand, Flints, and the like Stones, being pregnant with Gold, contain much Gold, or but little.

White Sand and Flint, contain the least Gold of all; which Sand indeed is never without Gold, although it cannot be extracted from it with profit. In the white and red, there is more Gold than in the white, nevertheless not always so much as will pay the cost. In the yellow, brown, or black, there is commonly much Gold contained, whensoever veins of white or yellow Sand run through them, and especially when such Sand shineth with abundance of small golden sparks, closely adhering to each other. In like manner that Sand is rich in *Sol*, which is like to Talck, or when Stones are found in it, in which there is red or brown Talck, even as *Sol* is contained almost in every Talck, nevertheless in some more, in other less.

All River Pebbles (which although outwardly they appear white, yet when heated red hot and broken, are stained with yellowness, and contain *Sol*) are in extracting sufficiently rich in Gold.

Green, yellow, or blue Stones, being transparent like horn [called in the *German* Tongue *Hornstein*] are also for the most part fruitfull in Gold. Also all

red, dark-coloured and black Flints contain Gold, with which Iron is frequently admixed, which in the extraction is drawn out with the *Sol*, and weakneth the *Menstruum*, and rendereth it unprofitable.

All Quarries or rocky Stones, whether they be found in the Earth after the manner of Ducts, or whether they lie in the open Air, when they are coloured, contain Gold. Every *Hæmatites*, and that which is a kin to it, the *Smiris*, the Granate, and *Lapis Lazuli*, all contain Gold, nevertheless always one more than another, so that some of them are rich in Gold.

All Granates contain Gold, and besides Gold, also the first Ens of gold; but they are endowed with so hard a body, that *Aqua Fortis* cannot exercise its power upon them. But there may be a remedy found, by whose help their extraction may be instituted.

In every golden Stone called *Chrysocolla*, *Saphyr*, *Ruby*, *Amethyst*, and *Hiacynth*, there is gold, but difficult to be extracted. All Fluors or things fluxing, which are applied to the Mines of *Sol* and *Lune*, for the bringing their Oars to a flux or melting, whether they be of a violet colour, or purple, yellow, red, or green) are all endowed with unripe and volatile gold. Which if you shall make red hot, the colour evaporateth like a green, yellow, or red smoke, leaving the Stones white. But if any Man shall know how to intercept, and detain such fugacious *Sol*, he may therewith coagulate *Mercury* into gold. In like manner from all Stones, in which is the first Ens of gold, a green-water may be extracted by the help of Distillation, in which *Mercury* coagulateth it self into gold. The Ancient Philosophers have called such a green-water, their *Green Lyon*, which devoureth gold, and of it prepareth a Tincture for *Lune* and *Mercury*.

Concerning this matter, I could indeed say somewhat more, did not the avarice and improbity of Men, who seek nothing but the damage of their Neighbour, restrain me. Hence all those in which any light of God shall arise, ought diligently to beware that they communicate nothing of it to wicked Men, although they put on the shape of an Angel. For Faith is now no where kept among Men, as these following words of a golden Alphabet do witness.

Soli Deo tu Confidas,
Promissis hominum diffidas,
Deus solus fidem servat
A mundo fides exulat.

In God alone repose thy trust,
With Mens pretence be not beguil'd;
God onely keepeth Faith, is Just,
Which from the World is quite exil'd.

If many years ago, I had known those things which I now do, it would have profited me much in being aware of the dissembled sanctity of impostours. But what is past cannot be recalled: Let these things at this time suffice to be spoken of the knowledge of Sand and Stones, every Man may look further for himself, and search out and learn more. If any Man findeth any good from what I have written in this Book, let him give God thanks, and be mindfull of the Poor; if not, let him look upon himself as unworthy to be partaker of it. For I have here written more perspicuously, than any Philosopher hath done before me, in which I rest. It now remains that we should say something concerning the easie way, and incomparable invention, by whose benefit *Sol* may be extracted from Sand and Stones, in great quantity and with a considerable gain. Which invention hath

been hitherto unknown to the World, and it is almost impossible that a better should be found. But that the searcher into Art may see that this new invention of mine, is of all the most easie for the extracting of Gold from Sand or Flints, and that the World hath never known the like, I have thought fit to shew in what this *Compendium* consists, and it is thus. It is sufficiently known with what labour and costs the ancient Workers in Metals, and even those at this day, have extracted, and do extract Gold from Sand and Stones, *viz.* when first they burn the Oars or Stones, then grind it in peculiar Mills accommodated to that purpose, with *Argent-vive* and water, where the *Argent-vive* draweth to it self the *Sol*, and the Stone goeth away in the washing, and the greatest part of the *Argent-vive* is strain'd from the gold through Leather, which may again serve for the same use. Then in Iron Retorts they drive out the residue of the *Argent-vive*, which yet adhered to the *Sol*, which is saved; then they melt the *Sol*. In which operation they lose much of the *Argent-vive*, which in the grinding and washing goeth away: so that often times the charge of the *Mercury* is no less than the gain of the gold. Therefore by this way nothing can be gotten from a poor Mine. But this is the easiest way they have to separate *Sol* from its Oar or Stones.

Another way is, when they mix the washed Oar (which the *Germans* call *Schlicht*) with its weight of Litharge, and melt it with Bellows, then cupel the *Regulus* of *Saturn*, and so they obtain the *Sol* which was in the Oar. Which way of melting, is also dear, because much of the Lead is lost: But yet they are obliged to follow this way, who know no better. Now I will compare my way with this, that it may be evident which of them is the most easie and profitable. As for my method of extracting, it chiefly

depends upon four singular *Compendiums*, by which the operation is rendred easie. The first of which is a water of small cost, which may be copiously prepared, without Distillation.

The second is a singular Metal, of which the Kettles or Pans are made, in which the Stones or Sand is boiled with the water of small cost, and yet are not corroded nor consumed. And when the water shall have dissolved and imbibed the *Sol* in the Sand, the Oar, Sand, or Stones, with the water are to be taken out of the boiling Vessel, and put into another Vessel adapted to this use, with a bottom all over perforated with small holes [like a Colender] and first covered with inside, with a thin Matt, then the water will drop down through the Sand and Matt into another Vessel placed under it; moreover more hot water is to be poured upon the same Sand, and let to run through it, which water will also extract the gold which as yet remained in the Sand. And after this Elixiviation, the Sand, (which is now of no use) is to be taken out of the filtering Vessel, and this labour to be continued so long, untill no more Sand is to be extracted.

The third *Compendium* is this, when the *Lixivium* of Gold, is collected to a just quantity, a singular Water of small cost, is poured into the Solution of Gold, whence all the *Sol* is precipitated from the Solvent, the Solvent by inclination is decanted from the *Calx* of *Sol*, and may again be used for the like extraction, seeing that it still retaineth its strength, being nothing weakened by the precipitation. Therefore we may use this Solvent a long time. And that which is lost by pouring too and again, is of small charge, because it may be recruited again by the like cheap Water. But if one should mortifie that dissolvent with

other contrary *Lixiviums*, to precipitate the *Sol*, as otherwise is wont to be done, and I have taught above, about the proving of Sand, what a loss should we undergo, if at every time we should destroy our Solvent? Besides such an extraction is costly and laborious, when made in glass or earthen Cucurbits.

But this extraction is almost of no charge, seeing that it may be perfected in great Kettles, and the Gold thence precipitated without loss of the Water. This extraction of Gold is like the extraction of Salt-peter from Earth, where the Workmen also elixiviate one part of the Earth, by the help of Water, which Earth they then throw away, and in room of that put other Earth into the Vessel, which they also elixiviate or wash, and that so often till they have elixiviated all their Earth impregnated with Salt peter. And by the same reason we elicit our Gold from Sand, as they make their Salt-peter.

The fourth *Compendium* is this, that the precipitated *Calx* of *Sol*, after the Water is filtred from it, is taken out of the filter and dried, and by the benefit of a certain singular good flux, not at all costly, is reduced, so that in the melting nothing of the Gold is lost.

In those four *Compendiums* the whole work of our extraction consisteth, as a building standing upon four Pillars, one of which failing, the whole structure is ruined. He that knoweth those four *Compendiums* may boldly enter upon the work, to extract *Sol* from Sand and Stones: for then it will be a work of profit to him, otherwise not, which I have declared for the information of every man.

But that I have made none of those four *Compendiums* manifest, let no man wonder, because I have been sufficiently hurt by the slanderous

Forgeries of cavelling Detractours. For when by reason of their dull apprehension, they could not understand nor perform those things which I had written openly and plain enough, they falsly traduced my Writings, as abounding with lies.

Let these things suffice to be written at this time, concerning the extraction of Gold out of Stones, Sand or Flints: which I doubt not but will be of use hereafter to many indigent Persons. For although all men should apply themselves to that extraction, yet they would in no wise incommode one another, seeing there are Sand and Stones every where obvious to all. And also the Salts for extracting are so plentifully afforded, that nothing is wanting but a man to put his hand to the work. But some one may here object and say: I do indeed believe *Glauber*, that in the Sand and Stones of the East and West *Indies*, *Africa*, *Spain*, *Italy*, *France*, and other hot Countries, much Gold may be found, but who will remove his dwelling thither to extract it? There is no need that any should go dwell in *Africa*, or either *Indies*, thence to fetch us Gold, seeing that it may be had sufficiently in *Europe*, and may be found in all cold places. It is well known, that in many parts of *Germany*, Gold is elicited from the Sand as well of small, as great Rivers and Lakes. But that more Gold may not be had in *Germany*, which is temperate, than in cold *Norway*, or *Sweden*, and less in *Germany* than in *France* or *Spain*, I will not deny. Therefore we need no Commerce with thirsty *Africa*, or *America*, as that with great peril of body and mind, we should seek Gold thence, seeing that we have it in every Countrey of *Europe*, and that not onely under ground in the Veins of the Earth, whence it is to be digged out with great trouble, cost and labour; but it is also every where manifest upon the Earth, where it is

much more largely and easily acquired. The most famous Monarch of Philosophers, *Paracelsus*, in his Book of the Vexations of Alchymists saith: *That more Gold and Silver may be found above the Earth, than in its profundity, and that oftentimes a Countreyman throweth a Stone at a Cow, which is of greater value than the Price of the Cow*. Which thing indeed is certainly true, nevertheless whosoever will not with *Glauber* believe it, let him remain in his unbelief. In *Esdras*, we reade these words: *There is much Earth of which Potters make their Vessels, but a small quantity of Powder or Dust of which Gold is made*. Which words are commonly thus interpreted, that, by the words powder or dust of which Gold is made, the Writer hath understood the Stone of Philosophers. The which is very agreeable to truth, but yet no Earth is found void of metals, nevertheless all are not so rich, as to afford any profit in the extracting. On the contrary all Stones and Sand (although every of them doth not contain corporal *Sol* so largely, as to be thence extracted with gain) rejoyce in the first Ens of Gold, or such a *Calx* by whose benefit Gold may be made. Which powder, if we know how to extract from them, we may make it better than Gold it self. But seeing such an Aurifick *Calx* is very largely diffused in Sand or Stones, and cannot be thence hammered out, but is extracted by Art alone, therefore the blind Covetours of Gold, with the Ignorant, will not believe it, because they know not how to perfect it. Hence an Art of this kind was by the Philosophers kept most secret, where *Paracelsus* speaking of the first Ens of Gold, saith that it may be elicited by sublimation. *Basilius* writeth that the preparation of the universal Tincture, may be compared to the distillation of a burning Spirit from the Lees of Wine. A comparison sufficiently

perspicuous! For even as in a great quantity of Wine or Beer, there is hidden but a small quantity of good Spirit, and the residue is nothing but an unprofitable mud, but nevertheless that little Spirit, by the help of distillation is always extracted from the great quantity of unprofitable mud, with gain, and is concentrated into a very subtile penetrating Spirit, of which one spoonfull is more to be esteemed than a whole pail full of Lees. By such means the Philosophers would have us extract by Art, that first Ens or form of Gold being very far dispersed in Sand and Stones, and concentrate or bring it into a small compass, of which, but asmuch as the magnitude of a Pease, is of greater worth than a huge Mountain of unprofitable Earth. Moreover, this I will not conceal, that throughout all *Germany*, in and about the Rivers may be found Stones, which are sufficiently rich in Gold and Silver, and moreover if you break them into pieces, you shall find within them little Holes and Caverns, which abound with a yellow or brown Powder, which if any one shall take out, and melt it together with Borax, he will acquire *Sol* mixed with Silver. But as yet, I never saw any man, who knew this sort of stones, and much less that golden *Calx* which is hidden in them. Which thing without doubt they have passed by, by reason of their negligence, not loving or seeking to know the physical *Magnalia* of God. I have found many the like stones in the sandy Hills about *Utrecht*, and in other Sand-pits of this Belgick Nation, but more about the Banks of the *Rhine*, and the Isle, as also the Coast of the Southern Sea, some of which stones I have yet by me. Also in the rough places of *Walavia* you may find much Sand and Stones, which contain corporal Gold. But there is no man knoweth any thing of them. And this might be of great use to Children, if they were placed for a

time in the Shop or Workhouse of some Artist, of whom they might learn, whence in any case of necessity they might be able to sustain themselves. But the rich, relying upon their own fortunes, think that they have Wealth enough for their Children, but if any adverse fortune shall chance to befall them, as their Houses to be burnt, or their Ships robbed by Pyrates of their rich Merchandizes, or be cast away by Tempests, or their Debtours break and run away in their Debts, then they know not which way to turn themselves; and because they have learned no Art, whereby to get their living, they commonly degenerate into men of a desperate life. For one leaveth his Wife and Children, and goeth into the *Indies*, where not a few have become a Prey to wild Beasts or Cannibals. Another, for a small stipend or pay, selleth his Freedom to fight by Sea and Land, untill like a mad Dog he is miserably slain. [*I have heard that it is a Custom in* Germany*, that a man may play away, pawn, or sell his Liberty or Freedom, which being once gone, he becomes a Vassal or Slave to the publick Service of the Prince or State, during his Life.*] Others, (after they have consumed and wasted all their substance, and have learned nothing that is gainfull in their youth, whence they might honestly maintain themselves and Families) betake themselves to a vitious kind of life, till they perish in it. To have truely learned Mechanick Arts, indeed helpeth much in fortunate times; but when the times happen to be troublesome and difficult, and many men in the same City exercise one and the same Art, one often hurts another, by eating the Bread out of his mouth, and reduceth him to straits. But if a Physician knoweth somewhat besides the Profession of Physick, by which he may obtain a Living, he will have no need to make so many Visits to the Sick out of a pressing

desire and expectation of getting mony for his diligent attendance. Therefore Hermetick Philosophy and Medicine, with their Cousen *German* natural Alchymy, are the most excellent of all Arts, and will so remain to the End of the World.

Seeing therefore that such great Treasures (as we have heard) are hidden in the despised Earth, and in such subjects as are every where trampled under foot, wherefore should we not extract them, for an honest maintenance, and defence against the injury of the times? Why should we not leave *India* to the *Indians*, and have regard to our own *Europe*, which abundantly affordeth whatsoever we need for the sustentation of Life? I cannot but say again and again, that were I but ten years younger than I am, I would not cease, but for the good of the publick, would publickly teach, and demonstrate to the Eye, true Philosophy, Medicine, and Alchymy. But my glass being almost run, I must commit the care of this labour to others who are younger and have greater strength of Body. Therefore in the mean time, whatsoever good I can do my Neighbour by wholsome Writings, I will not omit. I intend shortly (God favouring my design) to publish many secrets, hitherto unheard of. Nothing now remains but to close this little Treatise with,

The End.
Glory be to God alone.

An Admonition to the READER.

Whatsoever I have written in this little Book of the compendious extracting of Gold, out of Sand and Stones, is so true, that nothing at all is to be doubted concerning

it: Nevertheless after this Treatise was gone to the Press, another way, and that much better came into my mind, by the benefit of which, Gold may be extracted with a much greater expedition, than by the help of the former. Because for the operation of this last way, there is no need of any Kettles or Pans made of a certain singular Metal, but the extraction may be made in quantity without any boyling, in such Vessels as are every where in hand, and may be had, so that one man in one day, may by an easie business perform the extraction of a thousand Pounds weight of Sand. Which method is indeed much to be preferred to the former. Wherefore I could not but also notifie this way of extraction. What seekest thou? If I shall find that those my profitable inventions are gratefully received, I will not neglect officiously to serve the publick, in this present evil Age, and in the worser to come, by publishing the same. With which, benevolent Reader, I commit thee to the Divine Care and Protection. Dated at Amsterdam *the 26th. Day of* July 1664.

A Spagyrical Pharmacopœa: OR DISPENSATORY.

Being an exact description by what means, profitable, efficacious, and penetrating Medicines may be made, and prepared out of Vegetables, Animals, and Minerals; after an unwonted and easie method.

PART I.

To the well minded Reader.

Some or other will perhaps wonder at, and fain know what the reason should be of my describing this Pharmacopœa Spagyrica*, or Chymical Dispensatory, especially when they consider that there are not onely found various preparations of divers Chymical Remedies in my Books that I have published, but also many such innumerable Writings of such kind of businesses, are publick even from the days of old down to this very day, both profitable ones (of which the number is very small) and also unprofitable ones (of which there are a great multitude,) insomuch that it might seem altogether*

needless to commit to the Press any more matters of that kind. To satisfie such a one that thus enquires, I judge it well worth my while to demonstrate in this place, that it is not onely very profitable, but also highly necessary, well to distinguish between good and tried Medicines, and such as are not proved ones, not because you should neglect, correct, reject, and suppress other Mens Writings, and to esteem highly of mine. No such matter, for I well know that none can give more than he possesseth, and if any one doth (out of a candid mind) bring to light any thing for the profit and benefit of his Neighbour, how vile soever, and mean the thing be, yet is it to be most thankfully accepted of; and therefore let no body be so proud, as to presume upon the rejecting of the industry and labour of another Man, but rather extoll it with praises, though he himself could have done better. And so by what is here spoken, I would hint unto you that the very reason why I have published this small Treatise, is this, viz. *that my inventions may reach out an helping hand to poor afflicted mankind, and that I may assist them in a Christian manner, according to the will and command of the most high. And although I have already described the preparation of many profitable Medicines, as well out of Vegetables and Animals, as out of Minerals, in my Philosophical Furnaces, by the use of which in case of necessity, every curable Disease may be sufficiently enough driven out and carried off; yet nevertheless it hath seemed expedient unto me, to set forth this little Work under three Parts, each of which parts shall contain singular Medicaments as for example. The first Part shall comprehend such Medicines, as proceed from Vegetables, the second Part, such as proceed from Animals, and the third Part, such as may be had out of Minerals. And this also is a primary reason why I have comprised each kind of Medicaments in a singular Work or Treatise, because of the envious*

know-littles, and foolish deriders, and despisers of Art, who reject all Mineral Medicaments, (but they know not their properties) as unsafe at all times, because not taken forsooth out of the wholsome Vegetables, (whose use and virtue [say they] hath been approved for many Ages) but out of the poisonous Minerals and Metals, whereto no trust is to be given, and the use of them too is to this day very rare, and their operation too vehement. Now that I may stop the mouths of these kind of Men, and that they may see and know, that I likewise am well versed in the virtues of Vegetables, and their true preparations, together with their purification and fundamental Anatomy, and with their reduction into most wholsome and most safe Medicaments, I have purposed with my self in my first part of my Spagyrical Dispensatory, to treat of no other things save onely such Medicaments as are made out of known Vegetable Simples, without the addition of any other things, (either Animal or Mineral) as for instance, out of Herbs, Flowers, Roots, Fruits, and Seeds, their separation by Art, and their reduction into a better form. In the second part, we will treat of such things onely as proceed from, and are prepared out of Man, and other Creatures, and such as live in the Air, and also such as live in the Waters. But in the third Part I shall not desist from defending those Medicaments of mine, which I published some years since, and were prepared of Minerals, and shall demonstrate unto you, that they are not at any rate to be shunned or neglected, if rightly prepared and applied, but are to be preferred far before those Medicaments that are prepared out of Vegetables and Animals. To them I will also adjoyn the use and preparations of several other things, which I never as yet made mention of. Nor do I doubt but that the eyes of the blind will sometime or other be opened, so as to see the truth, and confess it and love it, to the doing whereof, I pray God, that Eternal, Immutable, and

durable Light, the Father and defender of the truth to help us. Amen.

THE

SPAGYRICAL

PHARMACOPOEA:

OR

DISPENSATORY.

What Vegetables are, or what is meant by the name of Vegetables?

You are in the first place to note, that under the name Vegetable, comes all that which hath its Food out of the Earth, which grows or is encreased, be they Herbs, Shrubs, or tall Trees with what appertains unto them, as the Root, Stalk, Leaves, Flowers, Seeds, and Fruits of them, as well cultivated as wild, both of our own Countrey, and Forreign, as well the known wholsomes one, as the unknown and hurtfull, whatsoever name they are called by, the kinds, shape, form, property, virtue, and power; of which, may be found described by many ancient and later Philosophers and Physicians, so that 'tis needless to make any farther rehearsal of them.

My purpose is onely to tell by what means, and by what most excelling way that innate virtue, operation, and efficacy, which God hath implanted into them, may, and indeed ought, by the dexterity and industry of Man, to be separated from their dead Fæces and Husks, and be concentrated and applied in a convenient form to Diseases, and be reduced into a most pleasant and acceptable Essence. But some may object and say, what good is here in bestowing such a deal of labour and care to extract the virtues out of Herbs, and concentrate them, and so at last administer them to the Sick? Will it not be all one, if any one know their natures, virtues and properties, (the which may abundantly enough be known by the large description given of them, in the Books both of the Ancient and Modern Physicians) and so make use of them, green and dryed, according as they are at hand, or else first steep them in Wine, Ale, Water, or any other drink used at Meals, or else boil them therein, or omit the decoction, and drink the infusion, and so administer help. Will not that perform the very same effect, that the well prepared, pure, subtile, sweet, and efficacious essence will? I answer that without question, there is extracted some kind of virtue out of the Herbs, by such a kind of infusion in Wine, Ale, or such other like drinks, and is together with the Wine carried into the Body, and effects no small things, if it meets not with too much matter that is to be turned out. But yet no body will deny but that their virtues being extracted and concentrated, and taken in a spoonfull of Wine or Ale, will operate more speedily, and be taken in more pleasantly, and display its virtues more effectually than the boiled Herbs, or its infusion; wherein by reason of the virtue of some few drops as it were lying hid in a whole handfull of Herbs, we

are constrained to drink down together herewith such a deal of Wine or Ale, which too is rendred very unpleasant and ungratefull by the Herbs: This the Ancient Physicians well observed, and made an accurate search many Ages ago, by what means they might best of all prepare Herbs sundry ways, so as to be taken inwardly with delight, and be encreased in their virtues. Thence it came to pass that so many preparations are brought into the Dispensatories, which abide in use even to this very day: amongst which there are distilled Waters, Oils, Balsoms, Ointments, Juices, Electuaries, Conserves, and such like; the which I do not by any means reject, but onely mention how the virtues of Herbs may be administred to the Sick, in a far more pleasant form. It is all one to me, if the aforesaid and usual preparation of Herbs be still in best repute and so continue, for I neither sow there, nor expect to reap thence. And should I need their help (which God forbid) and that I had no better to supply my necessity, I would give God thanks, for his vouchsafing me a part of those prepared Herbs, lest I be constrained to make use of raw Herbs, in that manner that the Cows eat grass, but yet that I have better, no Body can blame me, if I rather use them, and am willing to communicate them out of love and duty to my Neighbour. Verily no Body is compelled to do otherwise than as pleaseth him, one useth Herbs in an infusion of Wine, another eats them with Vinegar, Salt, and Oil, another takes them green as they are, and cuts them small, mixeth them with Sugar, and assoon as they are come to a dryness, brings them into Powder, and takes them in some Broth; Another may thicken them with Honey, and Sugar, squeeze them in a Press, and so use them. And plainly 'tis no matter what way a Man takes in using

them. Some there are that can't abide any Powders, because they stick to their Gullet and will not pass down into the Stomach, others can't endure Pills, and some you will meet with to whom all sweet things as Honey and Sugar are distastfull. And you will find many too that can't endure Wine or Ale, wherein Herbs have been steeped but all night. Upon this account venerable Antiquity considered of so many preparations of Herbs, that if haply one way did not like them in administring them, the Physician might make use of another way, and so Men did year after year attempt more and more the preparation of sweet Medicaments, and so trimmed and adorned their *Pharmacopœa*'s daily by little and little, and brought it to a better state: And that is thus evident (I will now speak onely of the Vegetables,) *viz.* there are to be found almost in all well constituted *Pharmacopœa's*, burning Spirits, which are produced (by distillation) out of fermented Herbs, as likewise Salts, which are extracted out of calcined Herbs and again coagulated; also extracts, and (by the mediation of the Spirit of Wine) thickned Juices are extracted; also distilled Oils, and some coagulated into Balsoms. And many more preparations of this kind, and better sorts there are, which have not been of any very long standing, but have been by little and little added by good and faithfull Physicians, all which things do perform as much as they ought (or may be expected in the rank in which they are) nor ought any one to throw them clear off. But now if any one knows how ingeniously to extract the virtue of an Herb, and to concentrate it in such a manner, as that one onely drop shall be of as much efficacy as a whole cupfull of distilled Water, or as a spoonfull of Powder, Juice, Syrrup, or Conserve. Why I pray, should not one drop be in all likelyhood more

willingly taken than a full Cup, or a spoonfull? That which may be done by a few, needs not be done by a great many. But haply some other will say, how can I be certain that there is a greater virtue in some drops of some good Essence, than in a whole spoonfull of dryed and finely powdered Herbs, or of green Herbs condited and beaten with Sugar, or than a Potfull of distilled waters; now this may be known by the virtue, odour, and tast, and that on this wise. If a few drops be put into a potfull of pure fountain water, and be stirred with a *Spatula*, the said water doth then exactly resemble the odour of the Herb when whole, and doth as to its tast agree with that water which is drawn out of the green Herb by distillation. If therefore the odour and tast be there, the virtue cannot be far off, besides the use will easily shew it, if both of them are in the proof compared together. And this now cannot be contradicted by any probable argument, for it is clearly evident to every one, that such a kind of Essence is an hundred thousand times more efficacious (respect being had to the quality and quantity of the same) than the Herb either green or dryed: Besides there also ariseth this benefit, that such a kind of Essence doth not at all lose any thing of its virtues though kept a great many years, whereas the other preparations and especially the distilled waters will grow musty and putrifie. But an Essence will (if warily preserved) endure as efficacious above ten, yea an hundred years, as it was the very first day that it was made. Forasmuch therefore as these things are without controversie thus, we should rather mind the chusing of such things which being but small in quantity, are pleasanter and more efficacious than those that are of so great a bulk, which indeed are of little or no efficacy at all. There is no body will deny, but that

the virtues of Herbs are widely dispersed and hidden in themselves, and for which virtues sake we are forced to take the whole Herb, that is, the dead body for that little virtue that lies hidden therein, just as if a Man instead of Bread should eat the crude wheat together with the stalk whereon it grows, which certainly would prove very hurtfull to the Stomach, and would together with its allaying our hunger corrupt the Stomach, and make it unfit for digestion. If therefore the Countrey-men who are the most sluggish and unaptest Men of all others, have by a long course of time arrived unto and experimented this Wisedom and Dexterity, *viz.* that the Corn is not just as it comes out of the ground in its husk and stalk, at all fit for the use of Man, and do likewise well know that it is far more profitable (if the grain be first threshed out of the Eare, then ground small in a Mill, the husky Bran be separated, and then the pure Meal mixed with a little water and Salt, or ferment Leaven, and so the Past suffered to ferment, and afterwards be baked) than to use the crude Corn just as it grows, why should we not use also the utmost of our endeavours to extract the most pure Essence out of medical Herbs, and so to administer them to the Sick; than to use the crude Herb as it comes out of the Earth? And this I instance onely for example sake, that it may appear that a legitimal preparation exalteth a thing into a far better state than it was before. And this may be demonstrated by sundry examples, if need required, but sure here is no body that is such an unwise Tatler as to dare to oppose it. Forasmuch then as the case stands thus, that an extracted, pure, and subtile Medicine, operates far more speedily and safely, than when prepared after the common manner, I judge it much amiss to conceal the way that leadeth thereunto, and

not to give directions for the use and profit of ones Neighbour. Nor indeed can I say that this invention of preparing Essences of Herbs did proceed first of all from my self; for 'tis unknown to me what another may either have done, or is able to do. But this I know, that no body hath hitherto mentioned the same either in Writings or otherwise, and that this preparation is no where known or in use. Well be it as it will, whether or no others know it as well as I, or have known it before me, yet it ought to be accompted a good thing, that I bring it forth to light for the sake of so many sick People. And it would have been much more acceptable unto me, if any body else had published it before me, and had eased me of this labour. But that I may return to my purpose; I will begin a brief but very clear description of the way whereby the virtue of Herbs is to be extracted and concentrated, that so by this means they may be more effectually operative in Diseases, and be more commodiously administred than the crude and unprepared Herb, and it is to be done as followeth.

The Preparation of the Essences of Vegetables.

Take of an Herb cleansed from the Earth, and its withered and putrified Leaves, both Root, Stalk, Leaves, Seed if they may be had, as much as you list, but however let it be at the least some fifty pounds weight, for the Fermentation will not succeed so well in a lesser quantity, as if taken in a due measure and plenty. Cut the Herb, *&c.* small, pour Water hereupon as much as is sufficient to fill your Copper Still, within an hands breadth of the top, urge your fire somewhat strong, and there will distill forth a clear and well smelling Water, together with a little Oil, which you must separate from the Water by a tritory

or separating glass, and reserve it apart: then take out the Herbs remaining in the Still, put more of your Herbs in, and distil the Water and Oil as before, this repeat so long, until you have distilled all the Herbs, always separating the Oil from the Water, and keeping it apart. Now then all the Herbs being thus distilled, pour water on them again, and put thereto a spoonfull of good new Ale yeast, and let them ferment together in a woodden Vessel covered over for some three or four Days: Then when the Herb begins to leave off working, 'tis enough, and is fitted to send forth in a volatile manner by distillation its most pure parts, *viz.* Salt and Sulphur. Stir the matter well with a stick, that so both thick and thin may be well mixed together; fill your Still herewithal, give a fire by degrees, that the Herbs burn not too, and the Spirit tast of an Empyreume. Distill it with a Refrigatory so long as the water hath any savour, the which you may easily find by tasting it often, when the water comes forth insipid cease from the Distillation, keep what is distilled forth in glasses: Then empty your Still and fill it again with more fermented Herbs, even within an hands breadth of the top, distil thence the Spirit, the which so long repeat until there remains nothing of the Herb undistilled. Then having cleaned the Still and Refrigatory, pour hereinto all your distilled Spirits, and rectifie them, take onely the strong Spirits, pour out the insipid water left in the Still; rectifie the Spirit again in an Alembick in *B. M.* and it will again put off an insipid water; and if need be repeat this rectification yet once more in a glass Alembick, that so the Spirit being exalted by a farther operation may become very strong and subtil, and its internal Vertue may be concentrated. So then, now take the Herb from which the Oil and Spirits proceeded, make

thereof small Balls which dry in the *Sun* or at the Fire, burn them unto Ashes, from which Ashes extract the Salt with the insipid water left in rectifying your Spirit, and coagulate it: This Salt you must again dissolve with more new water and filter, and coagulate it and then it is enough. To one part of this Salt, pour two parts of the rectified Spirit, and gently abstract it in a *B. M.* and so the Spirit will receive into it self asmuch as it needeth of the fixed Salt, and bring it over with it self by the Alembick: But the fixed Salt holds back the Phlegm, which as yet lurked in the Spirit. But now the Salt thus moist, if it be again fired (or calcined) is as good as it was before. To this Spirit thus concentrated even to the utmost, pour an half or a third part of the Oil you distilled before out of the said Herb, mix them together by shaking them well, and the concentrated and Alkalizated Spirit will in a moment devour his said proper Oil, and will all of it be converted into a clear efficacious and pleasant Essence. In which Essence the volatile Salt and Sulphur of that Herb are united with the fixed Salt, and are to be accompted of, as a pleasant, penetrative, efficacious Essence, and friendly to nature; the which may be mixed and profitably taken with any Liquor: A few drops of which have more Vertue than a whole handfull of the crude Herb. And this Essence being taken into the Body, doth not onely operate more efficaciously in those kinds of Diseases which the Herb served for before its being thus prepared, but doth also (by reason of its subtil purity) more speedily display its Vertues, and being externally applied, doth (by its Odour) corroborate the Heart and Brain beyond all other, how sweet and odoriferous soever thickened Oils, prepared with Civet, Musk and Ambergrese; all which it compared with this Essence, are to be

esteemed of as a dead Body: For in this Essence, the volatile Salt which is conjoyned with the Oil, doth presently introduce (or lead it inwards) and make it subtil, even to Admiration. And so this Medicine serves as well for inward, as for outward Uses. And certain it is, that the sweet Odour of any Herb, such an one as by which the Heart might be comforted, as it were in a moment, doth sometimes effect more than another comforting Medicine taken into the Body. For the Heart of a Man lives of the Air, as a Fish doth in the Water, the which being pure, the Heart becomes also well thereby, and so on the contrary ill. Why should a Man love to smell a Flower, did not the sweet Odour comfort his Heart and Brain, and were not his Spirits refreshed thereby. If then the Flower and Herb effecteth thus much, where the sweet and comforting Spirits are as yet encompassed, involved, wildly diffused, and tied to their dead Body; what will the Spirit do, being separated from the Body, highly depurated and again concentrated. Besides the daily, and (to all) well known experience, that a pleasant Air refresheth the Heart, but a corrupt and infected Air (as is evident in the time of the Plague) doth (on the other hand) debilitate it, and plainly suffocate it; It might be an easie matter to produce Histories to prove and verifie the same, but that it would be too tedious. But yet I must needs set down here one or two memorable ones, for the better confirmations sake of my Opinion. *Josephus de Acosta* an acute and very expert Philosopher, of the Order of the Jesuits, wrote a Book of the Condition and Property of the Isles of the West *Indies* newly found out, and amongst other things in the third Book, and ninth Chapter, speaks of things no less incredible than true, concerning the nature of some Winds which (in some Provinces

scituate beyond *Chili*) leap down as it were from the Tops of Mountains and Desarts, and saith of them, that these Winds, do (by reason of the notable piercing cold) not onely cast or throw down for dead, the Passengers passing that way, who not dreaming of any such thing are not well provided against it, but doth also wholly kill some meerly from that most subtile Cold, so contrary and extremely inimicitious to the Spirits and Life of Man. For even as a pleasant and temperate Air doth preserve and cherish our vital Spirit, and nourisheth it; so on the contrary an intemperate and cold Air, doth suffocate and kill it: The which thing is wont to happen to such as sail at Sea, for there the Air is infected by the motion of the salt Sea, and doth so affect and debilitate those that are unaccustomed thereunto, and especially their Brain, Heart, and Ventricle (as we said above concerning the cold Wind, in the Desarts about *Chili*) that it causeth men to vomit, their Head and Heart pains them, they loath both Meat and Drink, until they are accustomed to the Air, and can well brook it. Besides this story I will yet add another, to shew that an infected Air can bring more detriment to the life of a man, than any corporal Poyson. For a corporal Poyson invades the stomach onely, which by the help of Nature doth easily expel the same again, which is sufficiently witnessed by all well known Histories, *viz.* that a man casts out by vomit a Poyson that is drunk down inwardly, but that spiritual Poysons do hasten to the Heart, to suffocate the vital Spirit, unless a man be well armed, and this shall be instanced unto you by the following History.

About some 30 years ago, there were two Mountebanks at *Paris*, that had their stations not much distant from one another, and they did each of them to their utmost commend their own Treacle

which they sold to the Inhabitants, thereby to disparage each other, and each to allure the men to himself onely. But at last they came to a bargain betwixt themselves, which was this, each of them should defend himself with his own Treacle, against the Poyson the one should give unto the other, and thereby defend the excellency of his Medicine. Well, one of them takes a huge Toad, swallows down one half, gives the other half to his Companion to devour, the which he also swallowed and neither of them hurt. The next day following, the other invites his Adversary and used this Stratagem. He took a Viper, together with a Toad and put them into a Drum, adding hereto an handfull of Salt, and ordered the Drum to be beaten a while with Drum-sticks, with which unwonted noise both the Serpent and Toad being enraged, breathed forth their spiritual Venome, and filled all the Drum herewith: This done, he bid his guest put his nose to the hole of the Drum, which is usually about the middle of it, for the letting forth of the sound, who as soon as ever he had drawn in the spiritual Venome, fell backwards and died presently, not dreaming any such matter, nor understanding that the spirits either good or bad have as effectual operation upon the body, as a corporal Poyson hath.

I have not inserted these two stories, to fill the Paper up with words, but to shew, that Spirits being separated and freed from their bodies, are in there virtue and operation an hundred times stronger than the bodies themselves are, though conjoined with their Spirits. The which thing doth as well take place in such subjects that are wholsome and friendly to Man’s nature, as in these here rehearsed. It is abundantly known how many good and subtile Spirits I have described for the sake of the Sick, in

my second part of Philosophical Furnaces; yet few are here to be found that set about the preparation of them. Amongst which Spirits, that of *Sal Armoniack* is not the meanest, which because of its penetrating and temperate heat, doth exhibit a most present operation, and is a Spirit worth all Men's knowledge, and worthy every where to be had at the Apothecaries Shops. Yet I have not as yet seen it any where to be had, though I described a short easie way of preparing of it: But of this (if God will) more shall be spoken in the next part, where we treat of such Medicaments as are prepared out of Animals. Such as are their volatile Salts, and fixed ones, wherein a great virtue lieth hidden, and are (in some cases) to be far preferred before those Medicaments that are made out of Vegetables. But yet though it be thus, I cannot but admonish here that good and subtile Medicines are to be circumspectly used, and not to be administred to the Sick in a greater quantity than their nature will bear. Good and sound Wine is able to comfort, and conserve in health, the Heart, Brain, and whole Body of him that useth it aright. Whereas another that useth it immoderately, even the same Wine is able to inflame and infect his Lungs and Liver, to possess his Head, to bring a trembling into his Hands, and a Gout into his Feet, to weaken his Sight, and to fill his Reins and Bladder with the Stone; and for this end it was never given by God, nor gotten with so much labour, but was created onely to serve for the health of Man. O what curious secrets do lie hidden in the Wine onely (not to speak of Corn and other Fruits) all which the World neither knows nor cares to know, and I have determined with my self to publish, in my Vegetable Work, but yet it is at the pleasure of God, whether he will permit so to do or not. It is sufficiently manifest

by Wine alone, that the abuse of a thing hurts not the abused subject, and the same may be said of other penetrating Medicines, whose operation is according as you use them. We do not suffer a Child or a Fool, neither of which are *compos mentis*, to meddle with a sharp Knife, for fear lest they should hurt both themselves and others too; but now a Wise Man useth it aright, and knows how to employ it both to his own and the use of other Men. If then one hurts another with a Knife, the fault lies not in the Smith that made it, because he gave it such a keen edge, but in him rather that used it amiss.

Thus much I judged it worth the while to advise you of, lest haply some of the Essences which I have described, should undergo a wrong censure, as if they were too hot, but if they should, it may be known what answer to give. For I confess that too much heat doth as well extinguish the Vital Spirit (seeing it is a temperate warmth that is its life and nutriment) as the cold, which is an enemy to nature: and therefore you are here taught not to drink down these fiery Essences as if they were your ordinary drink, but they must be wisely administred, *viz.* 1, 2, 3, or 4 drops at a time according as the Patient is, in a spoonfull of Ale, Wine, or other liquors. And so the Medicine penetrateth through the whole body, and performeth that effect which God hath given it. But this is to be known, that the force and essence of all good and wholsome Herbs consisteth of heat, the which by how much the more it is dilated and diffused throughout the body of that Herb, so much the less observable is it; and by how much it is contracted, by so much the more visibly and sensibly is it apprehended. Whatsoever yields a temperate heat, is acceptable and wholsome to nature; and contrarily, whatsoever refrigerateth too much, all

that is inimicitious and deadly, and this even every one, to whom nature is in any small measure known, is enforced to acknowledge.

The death and destruction of the life of Man, is no other thing saving a dissimilitude and contrariety, whereby that which is alike and temperate is destroyed and dissipated, whether it be done by too much heat or too much cold, 'tis both on the same manner. Too much heat doth exhaust the strength out of a Man's body, just as a great fire draws to its self a lesser. But a mighty cold drives the spirit and life of a Man to the heart, and is worse than the heat, but yet more insensible, and this is clearly evident in Wine, which being set in a Vessel at the fire, the Sun, or some warm place, the heat draws to it self the spirit and life of the Wine, and leaves behind an insipid or unsavory matter, because like covets its like, but if a Vessel filled with Wine, be set in an intense cold, that cold doth not attract the Spirit as the Fire did; but hates it as being unlike it, drives it into a little room into the center of the Vessel, so that having broken the Vessel and separated the Ice, the spirit will be found whole by it self, which otherwise, and in the heat did ascend and might be caught in a Receiver set hereto So then, the Spirit is constrained as well by too much cold, as by too much heat to forsake its Soul and Habitation and leave it to the power of Death.

And many things might be spoken both of the nature of heat and cold which are understood but by few. There lies hidden therein great *Arcanums* which is not at all fit for the contemners to be acquainted withall. An hot and temperate Air, and the light of the day being dispersed widely or a far of, are the graces and virtue of God. But the concentrated hot

Air and Light of the Day, what can they be else but God himself, the Habitation of pure Spirits. The darksome and cold night is nothing else, but the emitted and widely dispersed or dilated curse and wrath of God. But the concentrated and dark night is nothing else but the eternally mortifying power and center of all evil, and Habitation of evil Spirits, where is howling and gnashing of Teeth. Do but a little consider, what is it that a little concentrated handfull as it were of the Sun will not do? will not the heat kindle Wood, as it were in a moment, and melt Lead and Tin? what would not the Sun do if intercepted the breadth of three or four paces? without doubt it would suffice to melt Iron and Copper. But it exceeds all understanding to guess if the shining Sun were concentrated a miles breadth what would it then do. But yet it is likely that it would burn up the whole World in a moment, and make it vanish away in smoak, should the Sun shine on it in this wise. This may be demonstrated by the contact and union of the Sun's beams in Concave one a burning Glass. And if we are unable to behold the light of the Sun, when a little collected by some instrument because the brightness thereof is such, as to hurt the Sight; who is able to stand before the Sun it self, (and yet he is but as an egress or out-gone virtue of God) much less before God himself who is the Center of light. And could the darkness be so concentrated as the light is, what an incomprehensible and dreadfull monster (such as Death, the Devil, and the infernal Pit are) should we see, which God in mercy prevent. For by how much the fairer, excellenter, and more unutterable the concentrated light is, as being the divine presence and clarity, by so much must the concentrated darkness be the more horrible and more dreadfull,

for these two are contraries. I may haply have made too wide a digression, but yet these things are well worth your consideration, that so it may even from hence appear how little the nature of man is able to abide the extreams and centers of either heat or cold, for either of these is a death and poison, but their temperature is the life of a man. Forasmuch therefore as a Physician ought to be a Philosopher and Spagyrist, and such an one who hath nature in his hand and power, it is not difficult for him to find out a true temperature, which may give to nature that which she desires and stands in need of. Thus now it is hereby proved, that my Vegetable Essences are not to be therefore shunned, because they are in themselves hot, for then we might upon the same account shun God too, who in himself is a consuming Fire; but it lies in the Physicians hands to temperate and moderate these kinds of Essences with proper and suitable vehicles, according as best conduceth to the help of the Sick.

Moreover the external use of those Essences is very notable in the cold affects of the members, in which case they are a present help: for the volatile Spirit is as it were a leading vehicle to the Oil and volatile Salt, and the use of them is pleasant, if a little Cotton be herewith impregnated, and so put to the Nostrils and smelt to. It doth most notably vivifie (in time of infected Air) and comfort the Spirits, preserves the heart from the corrupt Air and contageous Vapours. It doth also correct and refresh the pent up Air in Parlors and Chambers, *&c.* if the Glass wherein they be, be opened and exposed to the Air, from whence the subtile Essence may be without ceasing diffused into the Air, and make the room smell sweet. So that whosoever is already in the room, or goeth hereinto will be refreshed with the friendliness of the Odour.

Nor are they very dear neither to him that knows how rightly to prepare them, and is not to seek in manual operations.

But now this method (which I have spoken of) serves for such Herbs onely as may be had fresh and plenty, and not so well for forreign Herbs, dried Spices, Woods, Seeds, and Roots, for they require another way which is as followeth.

Process for Spices, &c.

Forasmuch as that extraneous well smelling Vegetables are not every where to be had, as our home-grown Herbs are, we must deal more sparingly with them, and that on this wise. They must be powdered, and to every pound must be put five or six pounds of common water, and be macerated some three or four days in a warm place (whether it be Root, Wood, Herb, Seed, or the like) then put them into a Still and by Distillation draw according to Art some part of the water, and there will come forth together herewithall an Oil of that Herb or Fruit, which you must separate from the waters and keep by it self, untill you get the Spirit and volatile Salt also, the which are to be joyned with the Oil and be converted into a sweet Essence. Then take out the water that remains together with the Vegetable out of the Still, put it in a wooden Vessel, and add hereto the water you distilled and put thereto so many pounds of Sugar as the Vegetable weighed. When your Sugar is dissolved in the Water, mix therewith new Ale-yest, and let it stand in a warmish place, and the Spice will ferment as if it were a new Herb; when it hath done working, put it into your Still, and it will yield a Spirit, like as the new fresh Herbs did, and such an one as will both tast and smell strong of

that Seed or Wood you distilled, the which you ought to rectifie as is said before: the residue is to be burnt into ashes, the Salt is to be extracted, and the Spirit to be thence distilled, with which the Oil is to be conjoyned according to the before prescribed weight.

N. B. Now forasmuch as the outlandish Spices can scarce be distilled in quantity enough at one time onely, so as to yield Salt enough out of the remainder thereof, it will be well enough, to use the Salt of another Herb, instead of its own, or in defect of that too, you may use highly depurated Salt of Tartar as a substitute, but yet it is better to use its own proper Salt, provided it may be had.

This is the true and genuine description, how the Essences both of our own home-grown Vegetables, and likewise of forreign and dry Vegetables are to be prepared. Now remains that we describe the virtue and efficacy of the prepared Essences; and this I could do, would it not be too tedious, *viz.* to describe the virtues and efficacy of the several Herbs. But seeing there are already Books that are full thereof, I look upon it as superfluous to repeat the same, but refer the well minded Reader, to those kind of Herbals which treat of the virtues of the said Herbs. For whatsoever virtues the Herb either green or dry abounds withall, its Essence possesseth the same much more excellently, as being what is brought into a small compass, and so multiplied: whereas otherwise a good part of the Herb goes to the said contained vertues; especially of our Herbs here in *Germany*, in which the vertue is widely dispersed, and it is therefore far more advisedly done to collect them into a narrower room, that they may be the more commodiously administred. This moreover is well worth the noting; *viz.* that we can search out the

Vertues of all Vegetables by their Signature, far better than by reading those Books that are composed of scraps from one, and scraps from another *&c.* Neither is it so well always to acquiesce in the Writings of the Ancients, who also remained ignorant of such things as God taught them not, by nature. Pray what Master is there of knowledge that never erred from the truth? and who is it that you can in all things safely trust?

O! I could wish, that we could but reade, and understand the Writings and Signs of the said Herbs, by which it speaketh with us, we should not need so many seducing Books. Who I pray exalted *Moses*, *Daniel*, *Joseph*, *Solomon*, and many other Philosophers, to such an height of Wisedom and Art? It was onely God, who yet lives and can at any time easily doe whatever he formerly could: who can doubt as touching him, when God minds the enlightning or blessing of any one with his Gifts, he makes no use of any Books, for this purpose, and so instruct out of them, nor doth he dispute or controvert with him. We should seek unto this Master and learn from him, and not out of the elegantly written *Arabian*, *Græcian* and *Latine* Books. But now the world is come to such an height of pride and errour, that it can neither believe nor comprehend that any one can learn ought but in the Schools, and yet the most expert and most famous men that ever lived in the world, arrived to that famous light of nature without making use of the Schools, and the things that they wrote, they did not publish them in a strange Language, but in their own Mother Tongue, as is sufficiently evident. And this is the saying to this very day, *viz.* Whence hath this man his understanding, and was never bred up in the Schools? I knew him from his youth, and that he had

nothing in him. Alas good Sir, you are very wise. Brought you with you into the World more than I did? Were not you born a naked Infant as well as I, and that skill which any one hath, received it he from his Parents, hereditary? Is it not the gift of God, whether it be much or little? Art doth not consist in the variety of strange Languages, but in experience. It is one Art to understand and speak several Tongues, it is another Art to calculate the Course of the Sun, Moon and Stars, and to predict from them the Changes of Times and Seasons. Again, it is another Art to prepare and purifie the Nature, Properties, Vertue and Efficacy of all the Vegetables, partly for the conservation of the Life of Man, and partly for diverting accidental Diseases, and to know how to use them as need requires. Besides it is another Art, to get out of the Earth those many rare kinds of the wonderfull Creatures of God, and those Fruits of the Earth as the Minerals and Metals, for Man's use, (which is the End they were created for, and which we cannot want) and to depurate them by the Fire, to transmute them out of one form into another better form, and to have the knowledge, understanding and experience of them all.

As concerning the signature of Herbs, by which God teacheth us their hidden Vertues, many things might be said, and it were to be wish'd, that such a knowledge were earnestly desired, and sought after by all those that deal in Physick, and do thencefrom get their food, there would not then be so much need of troubling ones Brains with so many forreign and domestick Writings, where you shall find one gainsaying another, and so leave they as doubtfull what party we were best addict our selves unto and believe; but now we may easily find out the certainty and truth by their signature, and distinguish what is

erroneous, and proceed on with more safety in all the practise, yea and in time too (by God's permission) come into a far better State. And here you are to remember, that the signature of Herbs, do shew a Physician their Vertues as well as Books do, for indeed they rather trace by-paths, than walk in the way of truth. And here would be a very convenient place to treat of the signatures of Vegetables, but forasmuch as I have written a peculiar Book concerning them (which God willing) shall suddenly come abroad, let the friendly Reader have a little patience and expect it, wherein he shall find things wonderfull and unheard of.

But that there may appear some footsteps thereof in this first part, *viz.* by what means you are to meet with Diseases by the Essences which I have described above, I could not omit the reckoning up of some specifical ones, which I have proved by most certain experience to be good against some principal and well known Diseases: That is to say, in the Gout, there is Hellebore but especially Helleboraster (which is a kind of Ellebore) the *German*'s Tobacco, and the Tobacco of the West *Indies* are a singular specifick and most notable asswager and helper in all Podagrical griefs. Now the Physician should know and understand, what the reason is that Ellebore and Tobacco ought to be used in such kinds of Diseases. Then for the stone, I commend the Essence of the seed of the Ash [or Ash-keys] before all other stone-breaking Diuretick Medicines. For verily very many men have (by that same Medicine) been freed and restored to health, who have lain sick of it many years, insomuch that after their death there hath not been found (in anatomizing them) not so much as the least footstep thereof either in their Reins or Bladder: And yet before they used this Medicine,

they were almost every day pained with the same. This specifick is made of the seed of Ash, which is usually ripe in Autumn, the seed you are first of all to bruise well, and then mixing water therewith distil it into your Still, and separate the Oil from the Water, and reduce it into small Morsels or Troches with Sugar, for your daily use. But a whole sack full, and as much as a man can carry, will scarce yield you an Ounce or two of Oil: and one Ounce of this Oil will suffice for two pounds of Sugar, for a greater quantity makes the Sugar too unpleasant; for the Oil of the Ash-keys is very unpleasant and nauseous, insomuch that it will provoke to vomit, if too much of it be taken, otherwise it performs wonderfull effects in this case. But now if out of what remains behind, you do (by the means of fermentation) distil its Spirit, and after its concentration extract the fixed Salt out of the Ashes, and unite it with the Oil, then will you have a perfect Medicine, and most high specifick in the stone. And seeing that we treat onely of Vegetables in this part, it will not be expedient to mix herewith the Animal and Mineral medicaments, but in the second part somewhat shall be mentioned of Animals, which doth efficaciously bring forth stony and gouty Humours. Insomuch that the Urine of such a sick Person, doth (after the use of this Medicine) being heated at the fire, coagulate (like Cheese or Cows Milk) in the manner of natural *Calx vive* that is made out of stones. There is likewise amongst the Minerals, one of them that efficaciously drives out the stone and gouty Humours, which also we shall speak of, in its due place, *viz.* in the third part. In some internal affects of the Liver and Spleen, and in all concreted Blood be it from a blow, fall, or any other accident, the Essence of St. *John*'s wort bears the chiefest note: For it banisheth away all

pains, resolveth congeal'd Blood, and healeth an hurt (or wounded) affect provided the evil be not too inveterate. As for the Uterine affects of Women, when the Womb hath taken Cold and is moved out of its place, or otherwise hurt, the which produceth to Women many difficult and chronical Diseases; the Essences of Tobacco, Henbane, (of all sorts) being applied by means of a Spunge in a Uterine Instrument, are a most certain lenative and sure Medicine: they restore the *Matrix* to its place and quietude, and heal all other infirmities. In weak decrepid and decayed men, what will not the true Essence of Roses and Cinamon do? if often taken, it comforts the Heart and Brain above all other Medicaments: But this Essence must be prepared, and concentrated into a narrow room, that so one or two drops, whether put on the Tongue, or put to the Nose, may corroborate the whole Body by its vertue, and the stander by may have enough to do to admire its sweet Odour.

N. B. If any one hath a mind to make such an Essence, it behoves him that he first gets the true Oil of Roses, which is distilled out of the yellow Thrums on which the Roses grow, and not out of *Lignum Rhodium*, and is gotten out by the mediation of water (but you must not ferment them before you have gotten their Oil) then afterwards ferment them with new Yeast, whereby you may get their Spirit, for if you observe not this method, you will effect nothing, the reason is this: because if you set them a fermenting first, the Oil (as being the best and most efficacious part) is mixed and united with the Spirit, and so widely dilated, that it will be a hard matter again to concentrate it. Well, what shall I need say more of the vertue and efficacy of the vegetable Essences, seeing that the Nature and Vertue of them

is enough known already: But yet thus much I must needs confess, that I have not in all my life time seen any thing done, which was more sweet, friendly and efficacious, than these Essenses of Vegetables. For if the Essences are but prepared according to this description of mine, we can hardly be satisfied with their Odour, especially if made out of well smelling Herbs, as Roses, Violets, Clove-gilli-flowers, Bawm, Camomile, Pennyroyal, and other such like. Besides such kind of Essences may be made out of Gums, when their Oil is driven forth by the Spirit of Salt, (lest else they savour of an Empyreum, and become unpleasant) but with this Proviso that you use the Alcalizated well swelling Spirit of some other Herb, whose Odour is not much unlike, for the Gums do not afford a Spirit. Now there's *Assa Fœtida*, or Benzoin, Storax, Mastick, Camphire, Amber, and the like, nay even Civet, Musk, and Ambergrese may be reduced into very fair and pellucid Essences, by an Alcolizated Spirit, and be rendered far more pleasant than the common Musk, Ambergrese, and Civet: For the volatile Salt contained in the Spirit, makes the Body volatile and spiritual, so that at the opening of the Glass, wherein such an Essence is, the whole room will be filled with the sweetness of the Odour: But more of this in the second and next following part, wherein shall be taught, by what means a sweet Odour may be extracted out of our small Animals in *Germany*, not unlike to Civet. What shall I say more, methinks I have done enough, he that understands not this, would much less understand the things that are more subtil, should they be described. And though I could shew a far more compendious way of preparing Essences, yet haply the ingratitude of the World being considered, this that I have already done is too much, and if any is minded to carp at

these here, let him first give us better than these, but they will have a care how they attempt that. For he that is endowed with understanding, even he also understands that the labour and diligence of another man is not in the least to be disesteemed, for the truth will remain truth though never so much exposed to injuries. And as we have said, that good and efficacious Essences, may be prepared out of pleasant and well smelling Herbs: Even so by the same rule may ill smelling ones be made out of bad smelling Vegetables and Animals, which also have their use and are profitable, as in the suffocation of the *Matrix*, where, (for the most part) such things that egregiously stink are applied to Womens Nostrils, that (by their grievous smell) they may impead and repress the rising up of the Womb: And this doth sometimes succeed very prosperously; these are *Assa Fœtida*, *Castoreum*, burnt Rags, burnt Feathers and such like, which yield a most filthy Odour: And if now the unprepared Body, in which the Odour lies largely dilated doth nevertheless perform notable Operations, what would it be think you if the Oil of such bad smelling things were conjoyned with the volatile Alcolizated Spirit? I say it would do more than the crude Body, not onely ten, but twenty or thirty times more. But amongst all the fetid and ill smelling things, which are not inimicitious to Nature, these I find the strongest, *viz.* the black Oil of Tartar, which is drawn forth by distillation, and that too which is distilled out of Goats horns, Hogs hoofs, Birds feathers, and the Hairs of all Animals, all which do stink extreamly, and yet are not hurtfull unto man, as those Stinks are which proceed from rottenness, as from dead Beasts, Fishes, rotten Eggs, and such like, whose stink is wholly inimicitious to the Spirit of Life, do threaten

its destruction, and are (as much as possible can be) to be shunned. For the Heart, Brain, and whole Body is therewith infected, and debilitated. But why such strong smelling Oils as those are, that come from Beasts horns, Hairs, and Hoofs, do not perform the same, shall be told in the following second part, where we will treat of Animals and of such parts of them, as may be made use of for Medicine.

And thus will I put an end to the first part of my *Spagyrical Pharmacopœa*, and would have the Reader admonished that (if he would use this my Description of Essences) he would have a watchfull Eye by whom they are prepared, and not trust every Body that hath scarce saluted even the very first entrance of Art, and yet dares to make Medicaments, and administer them to others. For under this covering will be exercised great deceit, for some will not for their gain sake, bestow so much Labour and Costs, as to make Essences out of good and new Herbs, but scrape up any thing, that thereby they might onely bring forth somewhat or other that may resemble the Odour and Savour of the Herb. And although such Essences should be prepared of some of the best Vegetables, yet the covetousness of profit may cause that the Spirit be in too great a quantity mixed with the Oils, which may easily be done, if to one part of Oil, five, eight, ten, or twelve parts of Spirit be taken, because the Spirit is easier to be had than the Oil, (whereas according to my prescription two or three parts are to be taken onely) and therefore may you easily conjecture, that such Essences are far less efficacious; for the greatest virtue consists in the Oil, the which being by the Alcalizated Spirit, made volatile and penetrable, is introduced (or carried more inwards.) And besides this is not all, but there may be another abuse too, as

when a Man willing to spare his own labour, doth not himself make the Oils, but buys them cheap from some sweet Powder makers, which Oils may (and sometimes 'tis so) have in length of time lost their most subtile part, and are become rank and clammy, and so makes use of such, from whence no laudable matter can be effected, as is manifest to every Body. But admit it be so, that new Oils can neither be had nor prepared with your own hand, because of the defect of the Commodity, yet may such Oils as are never so old and never so much clammy be rendred usefull, if they are first distilled and then rectified in a Retort, by Spirit of Salt: For then they come over clear, and become fit for an Alkalizated Spirit to dissolve them, which such Oils as are old will not do. This I thought good to advise, lest haply he that thinks he enjoys a good Medicine, should impute the blame to me, or lay the fault to the Essence, when the effect answers not his expectation: For thus it hath hitherto hapned to my Medicaments, and doth even to this day fall out so, *viz.* that very many (in sundry places) do falsely pretend as if they knew my secrets, but 'tis untrue, and a meer diabolical couzenage, for they administer their own unprofitable Medicaments, selling them for mine, and especially my *Panacea* and Tincture of Antimony, which notwithstanding hath no affinity with mine, and what is more too they fear not to affirm that such Medicaments are made by my universal *Menstruum* (which they neither understand nor know how to use.) And because here falls in some mention of this *Menstruum*, 'twill be expedient to say somewhat of it, *viz.* what is to be understood concerning it, seeing there are so many various opinions of the same. Most People think that the Alkahest is a subtile water, whether drawn out of the

Air by certain instruments, or prepared by subtile Distillations, but in this opinion, they err. But yet I will not deny but an efficacious water may be drawn, not onely out of the Air, but also out of the most intense light of the Sun, and thus I my self have sometime done. But this moist dry *Menstruum* which I call by the name Alkahest, is nothing else but the Salt of the Earth, and may be used both in a moist and a dry form, and thus much the very Etimology of the word signifies, if rightly lookt into and read, *viz. Alkali est*, for the word Alkahest is compounded of two words, of *Alkali* and *est*, where the *l* and *i*, by a transverse line are made one letter, *viz. h*, and is then read Alkahest, but take away the transverse line, and then 'tis read *Alkali est*. Hence 'tis manifest to every body, that I have not rashly imposed that name upon this *Menstruum*, but have thereby openly named the subject. For this very reason it will be very expedient to suspend your judgment, and not to be so hasty in uttering your opinion and censure of such a thing as you do not at all know, but rather think thus, who knows if I understand what I say or not: I may happen to say somewhat unadvisedly which may easily be refuted, the which we see here to be done. For there have been various discourses of this *Menstruum*, as if I had given it a name so famous without any ground, seeing it ariseth from Salt onely, when as the Alkahest is a subtile water. But by what I have abovesaid it appears that I have not given it an improper name, but have called it by its peculiar Title; the which I did for the sakes of such as contend, to prevent any future controversie about the name thereof, but how it is to be used as to those secrets contained in *Miraculum Mundi*, is not to be spoken of here. Let it suffice the well minded Reader that I do again, and again assure him, that all and

every of the things I have there spoken, may without controversie be done by this one onely subject, *viz.* the Salt of the Earth. And so that Treatise doth rightly deserve the Title of *Miraculum Mundi*. But yet I do again by way of Summary as 'twere, Admonish, if any one should use this my Essence, and have it not rightly prepared, he throw not the blame on me, as that I had written unprofitable things, but rather let him that has not rightly prepared it, bear the blame.

But yet 'tis not to be doubted but that men of all states or conditions will in process of time endeavour the preparing of those Essences, not onely because they are a pleasant and efficacious Medicament, but withall because of their comforting, penetrating, and highly gratefull Odour. For the crude and cold Air in pent in rooms may not onely be tempered and rendred acceptable and friendly to nature, but it may also be happily and safely made use of in external cases and Diseases, as need requires.

It will therefore behoove everyone what way he may most profitably attain them by. The preparation is easie, so he use but diligence, and then may a good quantity of those kinds of Essences of all the Vegetables and Spices which are in use in the Shops, be easily gotten. Now such an one that hath conveniences to prepare them himself, he verily best knows what he has, and may safely trust thereto. There is also great difference in the Essences according as they are prepared; one will happily prepare them very neatly, another but rudely, but the difference will easily appear as well by its efficacy as by its sweet smell; as for instance. That Essence which is rightly prepared according to the aforesaid weight and proportion, must necessarily be

very subtile, sweet, efficacious, and of a strong Odour and Savour. But if it be otherwise 'tis a sign that the Oil was too sparingly added, and it can't be accounted of as a rightly prepared Essence.

N. B. The things which I have here spoken, of Odour and Savour which the Essences ought to have, are to be understood onely of well-swelling Vegetables, such as are Roses, Marjoram, Rosemary, Violets, Camomil, for the Essences that are prepared out of these, must needs be well-smelling and efficacious. But as for those Essences which are prepared out of those kind of Vegetables that have no such notable Odour, it can't be expected that the Essences prepared from them can afford more Odour than the Vegetable had, but yet do they excite a more present efficacy, as for example. The Essence of Wine which doth easily exceed all other comfortatives is notwithstanding void of any eminent Odour, nor haply doth it resemble any other than the flower of the Vine in Spring-time: and therefore being taken into the body, it displays its Virtues, but not by its Odour; even so, neither doth the Wine it self being taken into the body operate by its Odour.

And hitherto belongs the teaching how to come to get such an Essence, seeing that it is not prepared after such a manner as I have delivered for the general dealing with Vegetables, and that, because the pleasant Oil of Wine (without which [oiliness] no Essence can be prepared) is hard to come by. I will therefore teach the way of preparing it, but what I now write is onely for the sake of weak and decrepid old Men, and also the poor, but not for the wiselings and unworthy Deriders. For I very well know that some or other after he hath read this Book, will out of the good conceit he has of himself say, this is no

news to me, I knew this many years ago, *Glauber* doth not publish this of himself, but hath gotten it elsewhere out of some old Book or other: He that thus judgeth of me doth for no other cause say so, but out of envy and hatred to detract from my Writings: And the answer I make to such envious men is this. That I do not know whether any one heretofore either had, or at present hath either such or such a secret which I have made mention of in my Writings, or no. It may be for ought I know that such secrets were extant above an hundred years ago, and may be even at present in use with some, that I know not: however that's nothing to me: For it is assuredly false, if any say that I have borrowed from any one, or else out of any old Books, so much as one, much less most of, or all the secrets (according as the envious say) which I have published in my *Miraculum Mundi*, or in any of my other Writings: But I obtained them through the Grace of God by the many Trials I made, searching after them with my Costs and Labour. And forasmuch as such envy me, therefore do they privily scatter abroad their lies concerning me, which will in short time (God permitting) be demonstrated. But put case that I did take whatsoever I have written out of others, and out of ancient Books, will they I pray be either more or less profitable because of that, than if they were my own: Is it not one and the same for any notable thing to be emitted, who writes it, or whom it proceeds from, so that it be, and may be exceeding profitable to very many. But because of this envy and calumny which I undergo from wicked men, I do keep within my breast many things, which otherwise I would have communicated for the common good. And if so be that they cannot believe nor comprehend what is mentioned in my *Miraculum Mundi*, (and yet is not of

such deep search as the unskilfull imagine) how will they believe, that I should set before them far higher things? Well therefore may the old Proverb take place, *Secret things are for secret Men, and foolish things for foolish Men.*

Now followeth the process of preparing a comfortable and pleasant Essence out of the Oil of Wine, and its fixt and volatile Salt. I think there's no body will deny, but that hitherto there hath not been made any mention by those that are wont to distil Wine of any such thing as an Oil; save that by those that have written, that the Oil of Wine is to be sought for in Tartar and in the Fæces, and that a black Oil may be distilled both out of the dried Fæces of Wine and also out of Tartar, I think is sufficiently known to all Chymists: But such an Oil doth purchase to it self (by this way of proceeding) such an ungratefull Odour, that it is merely on that score, used neither inwardly nor outwardly, though it be endued with good Vertues. For verily I do not yet know whether there can be found (amongst all other things) any thing that stinks worse than that Oil that is prepared out of Tartar, and therewithall may'st thou drive away both Men and Beasts, because the Odour that it emits, is in a manner intollerable. Whereas this which I here mention, is a pleasant, friendly, clear and bright Oil, and is made thus. In the Vintage time, when the Grapes are pressed forth, take some pure Must, let it ferment in a Barrel, until it becomes white, and the greatest part of the Fæces settle to the bottom, which done begin your distillation, and draw out the Spirit, either out of a Copper Still tinned in the inside, or some other distillatory Vessel; of the Spirit will be no great quantity. After it hath ceased, take off the head, and pour that which remains into clean Glasses, let it

stand for some days, and there will swim at the Top a white Oil, and sometimes it will settle to the bottom, the which is to be separated from the Must, and will serve for the making the abovesaid Essence. But the Must, from which the Spirit and Oil are taken, may be mixed with your other Must, and it will again ferment and become Wine, but if you can't do thus for want of skill, make thereof a Vinegar. This is a most compendious and the most easie way of preparing the Oil of Wine, and although I know another way besides this, and how such an Oil may be had even out of the Autumn Season, yet doth it seem to me not so well to publish all things together, and at once: This way of preparation that I have now taught will to many be hard enough to effect, though it be clear enough described. And you are to observe, that in this work the due time of distillation is to be regarded, *viz.* When the Must is so far fermented, as that its tast is neither plainly sweet, nor plainly vinous, but a midling between both; which if neglected the fault is none of mine, for I have advised you of all things to a tittle. If you begin your distillation too soon before the Must is sufficiently dissolved, it affords no Oil; if you tarry too long, the Oil precipitates with the Fæces, nor wilt thou get ought, and therefore all things are to be done in their due time. But how this Oil is to be reduced, with his own Spirit, and his fixt and volatile Salt, into an Essence, is mentioned before, what use this Essence serves for needs no description. For every body well knows what a vivifying and comforting vertue there is in Wine, and yet the Wine is endued but with little Oil (though the Oil as we said before is the best part of the Vegetable) and besides, it is united with a great quantity of insipid Water, and crude Tartar, but the Essence is freed from those Crudities of Water

and Tartar, and is compounded of a due proportion of the most pure parts, or of the three Principles, Salt, Sulphur, and Mercury, and may deservedly be called the Quintessence or Soul of the Wine.

Whosoever he be that hath it, will see what good it is endued with, and how to be used. To me it seems to be an Antidote against Poisons; for seeing it is written of old, that a Serpent or other venemous Animal, cannot abide in the Vineyards at such time as the Vine flowreth, therefore the Oil and Essence of the Wine resembling this very Odour, the Essence may not unfitly be thought so be good in healing contagious Diseases.

But this is to be noted concerning Essences, that they must not be stopt with such things that will be melted by the Essence, but be rather stopt in with a double Bladder, lest the volatile Spirit should fly away. For should this so be, the Oil would again be debilitated and let go its Spirit, and the Essence would be corrupted.

And because my purpose was to speak of the preparation of Vegetable Essences, but not make a description of their most ample use, I will now put a period to this business, leaving every one to be wiser as his own capacity is. But yet, would the present time have permitted, I would have mentioned some specificks, which may haply be elsewhere done. But thus much I say, that in Wine, lies hidden very much which but few know, and which if one would reckon up, would stir up admiration. But it appertains not to this place, but to the Vegetable Work, which (if God permit) shall soon follow. But seeing I have made mention of Wine, I cannot omit to add in this place one thing, *viz.* what yet farther use the Essences of Herbs might be of, if always to be had ready

prepared in the Apothecaries Shops: For one, two, three, or more drops of Essences, being put in a Cup of Wine at pleasure and stirred about, that the Wine may be united with the Essence, do presently make the Wine clear and pleasant, resembling the kind and nature of the Essence you put in; and by this means divers kinds of Wines may presently be made out of one and the same Vessel, to refresh and please your guests: And this way far exceeds the using of extracts, which make the Wine troubled, but this leaves it clear. It will be needless therefore to put different sorts of Wines in several Vessels in Cellars, where they will all of them by degrees wax weaker and weaker, unless they are kept always full; but one onely Vessel, is sufficient for to make various kinds of Wines at your pleasure; and this is a very profitable secret for great Men and others, who sometimes must have various Wines. It is a usual thing with many to drink a draught of Physical Wine in a morning on a fasting Stomach, to strengthen the weak Stomach, and to preserve it from hurtfull Air, if they can but get it, and if they use that which is usually made of the Reliques of the Wine, and such decayed stuff, such is void of virtue, and brings more hurt than benefit. But now, having these Essences of Herbs, you may easily impregnate generous Wine therewith and make it Medicinal, and by this way maist thou be certain that thou hast good Wine, and not such as is made out of the droppings and refuse, which is usually employed to make Medicinal Wines of, and from whence gripings and other incommodities do frequently exist: But that which is composed of generous Wine, and a well prepared Essence deserves the name of wholsome Physical Wine. These things I was willing to add to this first part of my *Spagyrick Pharmacopœa* by way of

Ornament, and do request the well minded Reader, that he think well of my Labour, Diligence, and Intention. There shall follow (God permitting) in the two next parts, more good Medicines.

The End of the First Part.

THE SECOND PART OF THE Spagyrical Dispensatory.

Concerning the preparation of Animals, Vegetables, and Minerals, by an Universal Dissolvent.

Wherein is clearly demonstrated and exactly described, that Niter is the true Universal Dissolvent, and how all Vegetables, Animals, and Minerals, are therewithall dissolved, corrected, and their venemous and obnoxious property changed into wholsome Medicaments, contrary to the opinion of many ignorant Men.

What Animals are, and what is understood or meant by them.

I do here understand by the name of Animals all such things as have life, and a vital motion, as Men, all kinds of Beasts, Worms, and Insects, either in the

Earth or above the Earth, the Fishes in the Water, the Birds in the Air, and all the Creatures that can move themselves, and that do partake of a visible life. Amongst these living Creatures, there is this difference to be observed, *viz.* that some of them serve for the use of Medicine; other some of them are not fit for Medicine; for all those Animals which nourish mankind and sustain his body, have not a medical but nutritive power, so that out of them can't be prepared Medicaments resisting Diseases. For although that out of some Animals (as Oxen, Sheep, Goats, Hens, Birds, and such like) a good Essence may (by the benefit of Art) be extracted, so as to restore and strengthen a body that is debilitated by sickness (as you may see in my Book of the Kitchin Art) yet that labour doth appertain to the Kitchin, and Cooks, rather than to the Apothecaries. Therefore in this Treatise nothing else shall be mentioned, but concerning such Animals onely as do not nourish the body of Man, but (being eaten or any ways entring into Man's Belly, or other parts of his body) do by their venome most greatly hurt: But being inverted or turned in and out by the Spagyrical Art do become excellent Medicines, and (without that bettering them) would remain venemous and hurtfull: such as these are Vipers, Serpents, Toads, Scorpions, Spiders, and other venemous Insects; the which being spoiled of their venome or changed by Art, do become Medicines of a penetrative efficacy. Indeed a Serpent, a Toad, and other like venemous Creatures being onely boiled in common water, are barred of their Poison, and may be eaten without any hurt, seeing that their Poison consists not in the Flesh, but in the Spirit, and vanisheth by a bare decoction. Many examples do confirm this thing, and 'tis evidently known that Serpents have been

oftentimes boiled and eaten instead of Eels. It is no new thing in *India*, that that People do feed on great Serpents boiled, instead of Food, and contrariwise other Animals there are which do not deposite or lay aside their venome by a bare boiling, but do retain it, such as are Scorpions, Tarantula's and such like. But now, if to such kind of Vermine that are endued with so hurtfull a Poison, a water or liquor of a stronger efficacy be added, wherein they may be digested, their venome is turned into a wholsome Antidote, and is a resister of Poison, as shall be proved anon. This is certain, that the omnipotent God hath not created so much as the least Worm in vain, which cannot bring some profit, though by the under sort of Men, it be contemned and plainly neglected. But forasmuch as almost all such Vermine and Insects, are (by reason of their Poison) rarely used in Medicine, and scarce any one knows their occult virtues, from that signature God hath given them, or cares to know, the use of them remains unknown and in the dark. Nay it is well done, that (seeing the way of correcting such Poisons, or turning them into Medicine, hath lain hid from the greatest part of the Learned ones) their use was thrown out of the Apothecaries Shops. But yet in process of time, some of those kind of Vermine were admitted by the Physicians, as the Scorpions, Cantharides, and such like. The Scorpions being suffocated in Oil Olive do tame their own proper Poison; Cantharides, great Worms, and Milli-pedes, or Pigs lice, are used to provoke Urine. But yet not without danger, because of the venome they abound with. Nevertheless Men have dared to use them, and many times they have proved very profitable. But had their bettering been known; and had they (being thus corrected) been made use of, they would (without all fear of danger)

have procured a greater honour to those that used them. Now the usual way of all such as know not the manner of correcting them, such little Animals are dried, and (crude as they are) beaten into a powder, and so administred to the sick, and do some times (though with mighty hazard) perform great cures. Were the signature of such Vermine well examined, and their use in Medicine well known, and they were afterwards transmuted and changed (by the help of an universal Dissolvent) into a safe Medicament, they do then become such safe and effectual remedies, as to take away most grievous, (and in the accompt of some plainly incurable) Diseases, and do in many Degrees exceed the weak operations of Vegetables. For the Animals which God hath gifted with life, are of a far greater efficacy than the Vegetables, and this any one will not be over hard in believing of. You will find many wonderfull things in my Book of the signature of Animals, Vegetables, and Minerals (which shall shortly come forth to light) nay and besides their signatures, as well their unknown and occult Vertues as their known Vertues shall be herein declared. But in this Treatise, shall onely be mentioned some of the principal small Animals of use in Medicine, *viz.* by what means they may be reduced into most excellent and most safe Medicines, by the help of the universal Dissolvent. As for their Vertues, and Efficacy, the well minded Reader may search for them in my other Writings. And although I have met with admirable Vertues in some hitherto neglected Vermine, and would have also described them for the profit of my Neighbour, and so purposed to have made a large discourse concerning them; yet the love to my Neighbour (whom I would not willingly lead about in many erroneous Turnings) hindred me from performing it. For all the

Vertues that are apart dispersed amongst all the Vegetables and Animals, are all of them concentrated in one Mineral, and found perfectly united, so that there's no need of using so many distinct Medicines of Vegetables, Animals, and Minerals, and therefore I refer the Reader thereunto. But yet for satisfactions sake of such who abhor such Medicines as are made of Minerals, and dread them as if they were a Poison, I will detect the Vertue and Power of some of the most principal ones in Medicine.

Of the Signature, Property, and Medicinal Vertues of the Bull-like and Horned Scarabæus *or Beetle.*

I have known some of the biggest and flying *Scarabæus's* that have weighed half an Ounce, or a whole Ounce, and of a Chestnut Colour, and they will firmly stick to any thing by reason of their sharp Feet, and are furnished with double Wings, the upper ones are hard and smooth like an horn, the under ones are very thin and transparent, and shew like the dried leaves of Poppy. The Male is for the most part bigger than the Female, and is armed with two horns, which in their branchings resemble the Figure of Stags horns, hard and smooth like horn, and hollow on the inside, without any marrow, with these he defends himself. If you put one of them on a Table, and smite him often with some small twigs, and enrage and provoke him to anger, he doth not run away like as other Animals do, but sets upon his Enemy, with his upright and variously branched horns, as if he would revenge himself for the injury done him; and whatsoever you reach out to him, he presently snatcheth with his horns, and holds it so fast, that 'tis a hard matter to get it from him: If the thing be too heavy, he then leaves it, and goes his way without it: But if it be light, he carries it away

with him, and afterwards unlooseth his horns from it and lets it fall. The Females two horns are lesser and crooked, which open and shut like Pincers; whatsoever they seize on, they hold it most firmly, and if you expose to its horns any thing that is not hard she doth gripe it so long, till the tops of her horns touch each other. Being hanged at a Cats or a Dogs Ear she presently pierceth it through, and so holds that the Dog can't cast her off with her Feet, but (not knowing what is happened to him) runs to and fro, howling and crying out, as if he implored help from some body else, such is the innate anger and malice of this small Creature. They feed not upon Grass and the Leaves of Trees as other *Scarabæus's* do, but are nourished with the Juice of the thin soft reasinousness which is in Summer Flowers out of those Trees that bears fruit with stones in them, such as Nuts, Cherries, Plums, Pruens, Peaches, and such like. These Trees they sticking fast on, do by sucking out the Rosin thence flowing, support their lives withal. These small Creatures are truely Martial, and as if they were endued purposely by nature with Weapons, and armed. Some men do break off their horns, and carry them about them, as if they were a safeguard against the invasions and being set upon by wild Beasts, but I count this as superstitious. Some (I know) do reduce them with their Wings into pouder, and make use thereof, and have healed the inward pains and prickings of the Body: And have cured Quartanes, yea have in all Feavers hanged it about the Neck; but yet I believe it would bring more profit, if it be duely prepared and so taken into the Body. But what effects they will perform in the other parts of the Body I know not, nor have I hitherto tried or known them to have been used to any other intent than

before mentioned. But I am certainly assured, that there is a most wholsome Vertue in this insect, because of his thus living on, and being nourished by those resinous Juices which flow out of such Trees as bear those kinds of Fruits that have Stones in their inside: Wherefore I think that their whole Body is of a balsamick Nature, and I do judge by their signature, that they may be profitably used in curing all inward and outward hurts arising from beating, wounding, stabbing, and shooting, if they are first reduced into an Essence according to my method. The horns and those hard wings, may be reduced into a Magistery, apart by the universal Dissolvent, and serve for inward Use. And the body being on like manner prepared, may be applied and made use of for the allaying of all griefs, or pains both externally and internally. Without doubt it aboundeth with many other hidden Vertues which are unknown both to my self and other men.

Of the Pilular or Globular Scarabæus.

There are other *Scarabæus's* used in Medicine, *viz.* the black and globular ones, usually abiding in Horse dung, and also those that live in Oaks, and be of an ashy Colour, and are pleasant food to Poultry, who by feeding on them do lay abundance of Eggs, but the black ones they abstain from, and do not eat them. I know not whether or no these last mentioned (*viz.* the Oak ones) are any thing at all helpfull in Medicine. But yet thus much they do, if they are bruised and applied to the bare skin they cause Pustles, and so do those too that are called golden *Scarabæus's* that are usually on Roses, and Elder-flowers. Both these sorts have this property internally and externally, and so have the *Cantharides* or those green Flies called Spanish Flies, and do most

vehemently provoke Urine. If now these are by Art changed, and their venemous quality taken away, they are profitably used, and safely, in curing the Gout, Stone, and other grievous Diseases and bring a great deal of benefit. The black and globular ones are martial, and are not much unlike to the horned *Scarabæus's*; the ashy ones are of a Saturnine nature, the green ones of a venereal Quality, and the red and little ones are of a solar property. These last mentioned, are by the *Germans* called Golden and God Almightie's Birds, and some do boast that they have gotten out from them good Gold, and put it to the Test, which to me doth seem unlikely. I will not deny but that there lieth hidden in them a strengthening Cordial (as they call it) properly for corroborating a man's heart if a preparation or correction preceed, I should be unwilling to make use of them crude and unmended. Besides the aforesaid reckoned up *Scarabæus's*, there is yet another kind of black ones which creep along the Grass in the Months of *May* and *June*, and cannot flie as the above mentioned ones can, and yet have little Wings. These are exceeding slow creepers, and being put upon ones hand, do turn out a strong smelling Liquor, and are called *May* Birds, and the Worms of Fat by the *Germans*; the *Latines* call them the uncteous *Scarabæuses*. They operate most efficaciously, and are used by many for curing those most grievous Diseases of the Gout, Stone, Leprosie, French-pox, and Dropsie, one two or three Grains of them being reduced into powder, are usually administred, in some proper Vehicle. They do most vehemently expel Defilements, by vomit, stool, and Urine, insomuch that the Urine of the Gouty, Leoprous, or those that are afflicted with the Stone will be coagulated like Milk, or will become

tenacious, and wax hard like a stone, the which event may well astonish any one to consider of. I know very many that have had the Gout, and been cured of it thereby, though I confess it is a Medicine somewhat hazardous because of the force of its operation. But if it be first corrected by the Universal Salt, it may be most safely afterwards used in the curing of the said Diseases. *Wierus*, a very learned Physician, did heretofore publish a Treatise of the wandring Gout, and highly commended this *May* Worm, so called by some: And likewise the great common Earth-worms, for curing it. Neither is it without ground that this Worm [or *Scarabæus*] we mention, far exceed all the rest of them that are endued with Virtues, healing Diseases. The *Cantharides* come far short of it, and the sky coloured Flies, which are formed onely in Carkasses, are far short of the *Cantharides*. In the next place follow those greater Flies, that usually stay in men's houses, and keep buzzing about till they can find some raw Flesh, whereon they cast their filth in the likeness of small Eggs or Knits, which become Worms in a days time. And I do believe that there is scarce any Creature endued with a smelling so acute and subtile as this Flie, and upon that account I do not question, but that it would shew its Virtues in hidden Diseases. Yet I would not be any man's Authour or encourager to make use of him, because nature her self cannot by any means endure (when a man by chance eats the flesh that is defiled with their Excrements) their filth in the Stomach, but doth presently cast it forth by vomit as that it were a Poison. I ascribe to these Flies a mercurial Nature, and I likewise affirm that there are in the common Worms medicinal Virtues. For they do strongly expel by Urine and Sweat, and being made use of, crude as they are, they provoke

to stool, and cause vomiting. But I verily believe, that being corrected by the universal dissolvent and transmuted into a sweet Essence, they will become an excellent Specifick against Impotency, and a notable corroborative to such that are tired with the venereal Sport. Their signature is testimony enough, and the Figure of their Bodies, for they will sometimes stretch out themselves at length, otherwhile contract themselves into a shortness, one while become thicker, then presently, and as often as they please can they extenuate themselves or become smaller, nor can any Animal do thus besides themselves. Nor know I any Animal that doth (in Coition) more firmly adhere to the Female, than this Worm, whom I have many a time seen, in the Spring Season when the Cold is asswaged and the Earth again open, to join himself to the Female (not under the Earth) but to creep out of the Earth with half his Body, and so apply himself to the half part of the Female, who likewise creeps out of the Earth, and he so long labours with her, till there is made a thorough conjoining of both their Bodies. And these two Worms are so pertinacious or earnestly bent on this action, that they will rather suffer themselves to be slain than be separated. This venereal Labour being finished, they do each of them betake themselves into their Caverns or Holes. Such Hens as feed on them do plentifully lay Eggs daily, and sometimes two on a day, the which thing no sort of Corn will make them do. That Earthworm is endued therefore with a venereal Nature and Property. There are besides these, other small Vermine that are far more prone (and approach nigher) to a venereal Nature, and they are a sort that have six Feet and run most nimbly, and have wings but do not make use of them. They are small and broad, and are in great

companies in old Walls, and old rotten Boards of Stables, and lay their Eggs in the Walls and Wood. They come abroad onely in curious Weather, and in a rainy and cold Season do betake themselves to their Holes, and in fair weather out come they again, and observe no order in their coupling. The Female going, carries the Male along with her sitting on her back, another Male being stronger throws him off, and himself gets up upon the Female, and he again being thrown off in his room comes a new trader, and thus spend they the day in this riding kind of Sport, and the Female is exercised with an uncessant Change of Males. They are not seen to eat any Food. Some of them I shut up in a Glass so that they could not get away, yet (in this captivity) they betook themselves to this venereal Act, and at length setting upon each other, would rather perish with Famine than be separated. They are so small that an hundred of them will but weigh an Ounce: Their wings are red and spotted with black. They run exceeding swiftly, I never could find any thing written of them. I gave them to Cats and Dogs to eat with their meat, and I found wonderfull things. Hens and other Birds will not eat them, haply because they cannot brook the too vehement operation of them. They must needs be endued with singular gifts, he that will make trial, may so do, but yet so as not to use them but corrected, because (amongst all the Vermine that I know of) they do most excell, and abound with the greatest venereal Venome. There are yet besides these, other Worms (or Vermine) that are profitable to make Medicine of. The food and nutriment of the *Aselli* or Pig-lice is rotten Wood; if you touch them they rowl up themselves into a round Ball. They are for the most part used for repressing of the Stone. The Cimexes, or Knats, or Flies, are of a red colour,

and do vex and disquiet a Man at night, they suck his bloud, and usually quarter in old Pine-wood, and in ancient Chambers, and are detestable things because of the stinch they emit. And besides them, there is another kind of such Vermine that are of a green colour, and more venemous, and yield a more filthy stinch than the red Worms do. This Insect has wings, and is four times bigger than the Cimex, and live in the Grass; but when the cold Winter approacheth, they then live in hollow Trees, or hide in the Chinks that be in Walls. If an Ox or Cow do by chance in eating Grass swallow down such a kind of Vermine, they swell up, and sometimes die of it; but yet they do so well know how to shun them, that the Beasts seldom swallow them. I do from hence guess, that there lies hidden in this kind of Animal, some singular matter, because of its wonderfull disposition it hath: For I have tried by certain experiments that it can either retain, or emit its stinch as it pleaseth. It is a notable subtile and fallacious Creature, and this I could confirm by wonderfull stories. It doth exactly imitate the perverse disposition of all Turn-Coats, Lustfull, Venereal, and Bestial Men. It doth presently deposite or lose its stinch in the universal *Menstruum*, but what it will (being thus prepared) perform, I having as yet omitted farther inquisition, cannot tell. Infinite is the number of these and such like Insects, and without doubt they were not created in vain, they prosecute each other with a mutual and deadly hatred, and do by laying snares endeavour to destroy each the other. I have known one little small Worm or Insect, that by sucking out the juice and strength of the great Earth-Worms do wax fat, and is in all places his Superiour or Master. In the Spring-time he is a small lean Worm, and is not so big as the Blatta, that live upon Meal, but in Summer time he doth so

fatten himself with the Earth-worms, and becomes so unwieldy that he can hardly creep: He is black as a Coal, and moves himself by the many short feet he has, is about the thickness of a Quill, and about a fingers length, and under the earth shrewdly bites the poor Earth-worm, and sucks from him his best juice, which said Earth-worm being no ways able to defend himself, doth out of meer pain creep out of the Earth, and brings out his fast adhering Enemy: he sticks on to him so close, that he can't be driven off, and so long sucks, untill being well satiated and full, he at length falls off of his own accord. I have often seen these Earth-worms so long vexed with them and twined themselves to and fro till this little Vermine hath pierced the Worm through, and divided him in twain, but yet closable together again, if he can but onely get into the Earth. You may see evident signs of the malice of this small Vermine, upon some of the older Worms, that have had several such bitings, and yet closed together again. For I know no enemies the great Earth worms have, save onely the Mole, and this same Worm. This black and martial Worm having done with one, presently sets upon another Worm, and so sucks out the best juice, and leaves the body of the said great Worm destitute of any strength. He is of great virtue and as to his excellency is to be preferred far before all other Worms if but well prepared: As for Spiders, there are many talks of them as if they were poisonous, but I could never as yet find any such thing in those that grow in the space of one year, and then vanish away again; they are such that make their Webs on Trees, Bushes, and the like to catch Flies in, and are cross-bearing Spiders, because they have on their backs the figure of a Cross. Every month they put off their old skin, and so do those too that make their Webs in the

corners and holes in Houses, and will live three months without either meat or drink befor they die. These are somewhat worser than the former, and yet not so poisonous as the report goes, and as is believed. All the green sort of Spiders, that live in the Grass and among Leaves are void of all Poison, (and all others) save those which abide in cold places, as Cellars, and moist Vaults, and nourish themselves with Insects, and are covered over with a black and roughish skin like black Silk or Velvet, are slow paced, and as being the Kings of all Spiders, do kill the others by their biting, and devour them if they can but get them within their power. If one Spider be thrown into the Nest of another, the stronger drives out the weaker, but they cannot any of them abide these black Spiders, abhorring their presence, and running away as fast as they can. Nay more, neither the Black-bird, nor other Birds (whose food's the other Spiders are wont to be) will eat them. They grow old very slowly, and live in a Cellar many a year, as being patient endurers of the cold, and do not renew their skin as the rest do. Those likewise that devour the Flies in stores in the Winter, or at least-wise are nourished with the sweet fume or vapour of Hony, Sugar, and such like things, and arrive to an old Age, are also venemous. All these are rarely used in Medicine, there being indeed no need of them amongst such plenty as there is of good Medicaments. This one benefit I have observed in them that they so purge sick Hens, as that they recover their former health, and do presently after get strength and wax fat. Emmets that live by the juices and Rosins of Trees, are also used in Medicine, but yet do no great matters. Locusts, Grylli (a kind of Grass-hopper) and such like Insects, (though they are endued with hidden virtues) are notwithstanding

neglected, forasmuch as there is one onely Mineral that can effect more then all the bigger or lesser Animals, Worms, and Insects, and therefore well may they be despised. There are also some things that are taken from the bodies of the bigger sort of Animals that are used in Medicine, as the Stomach, Intestines, and Teeth of the Woolf; the Lungs of the Fox: The Gall, the Hair, the Skin, the Excrement, the Horns, *&c.* of other Animals; but yet no great matters have been hitherto done by all this ado, because they are parts or Members of such Animals, as being altogether void of Poison, are usually Man's Food, or may so be. Whereas were they the parts of Animals that would alter our nature, or were they the Teeth, Bones, Horns, or other parts of venemous Creatures, and then changed and reduced into good Medicaments, somewhat might be done by them. By such as alter nature I mean, the Teeth of Dogs, Wolves, Bears, Lions, and such ravenous Creatures; the Bones and Horns of the Elfe, Goats, Kids, Does, Stags, Elephants, and the Hairs of Men and other Animals. Amongst the venemous Animals, the Teeth and Skins of Vipers, Serpents, Toads, Salamanders, *&c.* In the third degree are the Teeth of the Sea-dog, and Whale, and of the horned Fishes, and those which the *Dutch* Marriners call Walrussen, and others the Unicorn: the Horns of them, and of other such like Sea Monsters, whose Flesh is venemous, and therefore their Teeth must necessarily be endued with medicinal Vertues, provided they be changed and converted into a convenient Essence. Besides in the Excrements of all Animals, lies hid a singular medicinal Vertue, nor is the volatile Salt (but especially of those that are poisonous) to be contemned. The fixed Salt being the subduer of many Diseases, doth not a little help to the making of

Medicine. But I am not minded to treat of these at present, but will onely demonstrate by what means all Animals are to be dissolved by the universal *Menstruum*, and Poison to be converted into most wholsome Medicine. The Vertues of them are already known, nor is ought more required save a due preparation, the knowledge of which I am minded to manifest in this Treatise. It is apparently evident that the Teeth, Horns, Skin, Hairs, and Claws or Hoofs, are by so much the better and more efficacious Antidote, by how much the greater and more present Poison their Flesh is endued withal, and this we see by experience. Such as desire to know more, of such like venemous Animals, may read my Book, of the signature of things, wherein they will find many profitable things and worthy of consideration.

The preparation and changing of all venemous Animals and Worms, &c. *into safe and efficacious Medicaments.*

As touching what belongs to their preparation, it doth not consist in the way that hath been hitherto used as to the preparing of Animals for medicinal Use, the which have hitherto been either reduced into Powder, or else have been converted into Spirits, Waters, and Oils, by decoction in a B, or else turned (by Calcination) into Ashes, that so their fixt Salt, may be extracted, or (by sublimation) pass into a volatile Salt. I do no wise contemn these, and other hitherto used ways and methods of preparing Animals for the use of medicine, for in very deed they are good and profitable. But forasmuch as I have the knowledge of a better and more compendious way of doing all these things, I neither would nor could any longer hide the same, but communicate it for the good of mankind, and for the

help and comfort of the sick. And now that the well minded Reader, may percieve a difference between the old way of preparing these Medicaments and my way, I will briefly declare and demonstrate the same. I have not hitherto heard or read of any other way than this which followeth, *viz.* The Animals are either wholly or else some part of them, dried in the Air, then powdered and administred in Powder in some appropriate Vehicle, or else some Honey or Sugar is added to the Powder, thereby to make it into an Electuary; or else the Animals are digested (whilst new or fresh) in Oil, then pressed out, and changed into a Balsam, that so they may serve either for inward or outward Uses as necessity requires. Or else they are made up into other Medicines, and so confected and kept for use. Or, being new, are distilled by a B. in water, the residue is by Calcination burnt into Ashes, and the fixed Salt, is (by the benefit of distilled water) extracted out of the Ashes. Some do distil the bodies of Animals, dry, or moist, in a Retort, and do get a stinking Spirit, Oil, and volatile Salt, which parts they Sever from each other, rectifie them, and keep them to use in time of need. Others do put the venemous Animals alive into Oil, or into some other Oil drawn out of an Aromatical Vegetable by distillation, and so suffocate them herein; and do afterwards use that Oil for outward and inward Uses, as is evident in the Oil of Scorpions. These are the ways hitherto made use of for the preparation of medicaments out of Animals, nor have they been fruitlesly used. But whereas I saw, that the Animals being prepared the aforementioned ways are venemous and crude, but especially when they are but onely dried and powdered, and so used, and that the administring them to the sick is not without danger, because they

set upon nature with too much vehemency, if any (nay the smallest) errour be committed in the Dose: and besides, they do (by their ungratefull and loathsome savour) beget a nauseate, and withal considering, that the Spirits, Oils, and Waters drawn out of Animals by distillation, do for the most part smell of an *Empyreum*, and are extremely distastefull to nature; and that though the volatile Salt, and the fixt, which contain the greatest Vertues of the Animals, and may more commodiously be taken into the body than the Oil, which is plainly intolerable to sick Persons because of its stinch; yet forasmuch as in such an Operation the chiefest Virtue is burnt up, and corrupted, and that therefore the Medicament so distilled is less profitable than the crude Body of the Animal; this way and method cannot at all be accompted of as worthy the being ranked amongst the best sort of Medicines. Seeing then and well percieving all these Circumstances, I counted it wholly necessary to bethink my self of a more profitable and better way, and such a way too, as by the help whereof, every Animal, or at least such a part of it according as is requisite, may (without any separating of the whole body into divers parts) be dissolved, and changed in its whole substance by a certain dissolving and correcting Water poured upon it, and so its venome be converted into Medicine. Now the dissolving Water, and the dissolved Medicine stand in such a posture, as that it may be again abstracted and separated from the dissolved and corrected body after its dissolution and correction, and this so corrected or purged body may be administred in some convenient Vehicle to the sick, or else alone by its self, as shall be more clearly manifested in the following discourse.

A universal Menstruum *by the help of which all Vegetables, Animals, and Minerals are dissolved, corrected, and reduced into a most pure and most safe Medicament.*

I have in my *Miraculum Mundi*, taught and told you that Niter is the true universal dissolvent, and is operated withall three manner of ways.

1. As it is in its own proper nature and form.

2. When it is changed into a fixt and fiery Liquor.

3. When (by the benefit of the fire) it is distilled into an Acid Spirit. With these three instruments are dissolved all whatsoever is in the nature of things, are amended, and transmuted into a better and purer substance. But the manner how this is done shall clearly be taught in this Treatise, and explained, insomuch that all such as have either out of gross Ignorance, or conceited Pride, or meer diabolical hatred and envy, hitherto contemned, despised, and traduced it as a thing impossible to be done (as *Farnerus* for one) may be confounded with shame, and be driven to confess, that their meer ignorance, pride, and envy, caused them to oppose the Noonday light, and attempt the extinguishing, blotting out, and obscuring the same. And although that I have described the preparation and use of the universal *Menstruum*, both in my *Miraculum Mundi*, and in its explication, as likewise in my Apology against *Farnerus*; yet notwithstanding many perswade themselves, that that description is too much clad over with darkness, and that without a more accurate and plainer declaration or explication, it cannot be understood, and consequently not made use of. Therefore that such Men may have their food ready chewed, and thrust into their mouths, and may

have no farther cause of labour and consideration, I will give a plainer declaration and make (in God's name, for whose honour, and for the benefit of all mankind, I have thus purposed to do) an initiation, and perfectly demonstrate, that Niter is (by the three aforementioned ways) able to dissolve, and alter all whatsoever is in the nature of things, and to reduce them into a better substance. These are the weapons wherewith I enter the list with all deriders and haters of the truth, and do demand, if they have any better and more powerfull thing, than this universal dissolvent out of Niter, if so, to produce it; if not, then to let this alone. Every man has his liberty, (if he hath better) to publish it for the common good; but if he can't produce a better, he may well submit himself to the truth. Verily would any man discover a better universal dissolvent, he would do me an acceptable thing, and I wou'd most readily acknowledge any errors I have committed in this matter, and would refuse my own proper writings. But that some such will arise and do this thing, I do not in the least fear. If such an one should come, we will hear and see him, and recieve him with a decent reply. In the mean while we will address our selves, to the preparation of good Medicines, to the honour of God, and benefit of our Neighbour. The bettering and correcting metals, which is to be accomplished by the said Niter, is exactly described and demonstrated in the second, third, and fourth part of the Treatise of the prosperity of my Countrey; in this place we have purposed to treat onely of medicines. But as for the way of reducing Niter into a fixt and fiery Liquor, and also into a Volatile, Acid and fiery Spirit; we have already taught in other places of our writings, so that it is a meer needless thing, here again, to repeat the same. But because it is profitable

to the lover of Arts, that he find both the preparations here conjoined, I have deemed it necessary to set them down both to your view.

The Process of turning Salt-peter into a fiery Liquor.

Take of pure Salt-peter, and such as is free from all common Salt one pound, put it into a strong and well burned Pot or Crucible, with a Cover to it, put it into a Wind Furnace, urge it so long with Coals till it be a bright red hot, and all the Niter flow; which being molten and in flux, cast in a little Powder of good Char-coals, that so it swimming at top of the Salt-peter may burn up. This Coal Powder being consumed, throw in some more of the same, and proceed on thus with casting on Coal Powder so long till the Coal Powder you cast in will not take Fire any more, and the Salt-peter appear of a greenish and sky-colour. Then pour it out thus molten into a warmed Mortar or Bason, (for if you throw it into a cold Vessel, it will leap up into your Face) and there let it lie till it be cold. If you touch your tongue with some of this Salt, you shall find it fiery like the Salt of Tartar. Beat this Salt into a Powder and put it into a Glass, or else set it in some moist or cold Cellar, and in few days, nay, or hours, it will be dissolved into a clear and fiery liquor, which strain through Cap Paper or a Filter (as they call it) and set it up for use.

The use thereof in the preparation of such Medicaments as are made out of Animals, and also Vegetables.

Forasmuch as the use of this *Menstruum* is already demonstrated in my first Apology against *Farnerus*, and in the first part of this *Spagyrical Pharmacopœa*,

wherein the Essences of Herbs are taught. But in this Treatise shall mention be made onely of such Medicaments as are preparable out of Animals. I will here set down the way and manner of operation, whereby not onely Animals, but also Vegetables my be corrected and transmuted into safe Medicaments. And here it is to be noted, that the use of this *Menstruum*, takes place onely in correcting such Herbs and Animals as are strongly operative and as it were venemous, whose malice is to be necessarily removed. For those Herbs that are good, and used in the Kitchin, and without any hurt in them, need not any correction, except one will make out of them, an extract by Spirit of Wine, or make of them a burning Spirit, and Oil, as also a fixed Salt, and conjoin them by the benefit of Art, and make them into sweet Essences, which labour is accurately described in the first part of my *Spagyrical Pharmacopœa*. In this place we treat onely of turning Animals, Vegetables, and Minerals into sweet Medicaments, by the benefit of Salt-peter: And in other places of my Writings is sufficiently enough taught by what other ways, and those various ones too, several Medicaments may be prepared, and that without the help of this universal dissolvent, whereto I refer the well minded Reader, and proceed on here to teach the preparation of the said Medicaments by that hitherto often named fiery dissolvent, which (without any additions) is of notable effect.

The Preparation of Animals and Vegetables by the fiery Liquor of Niter, their Dissolution, Correction, and Transmutation into wholsome Medicines.

Take any Animal or Herb, what you please, if it be

new, cut it small; if the Animal or Herb be dry, beat it into Powder, and pour thereto the liquor of fixt Niter, that it may well moisten the Animal or the Herb, and may cover it all over; set the Glass in a B. and digest the venemous Animal or Herb for one day and night, in which time the liquor of Niter will ripen the venemous Animal or Herb, and transmute it, and make a Medicine of the Poison. After the Cucurbit is cooled in the Balneo, take it out and pour forth the liquor, together with the corrected Animal or Herb into another Glass having a long Neck, and pour thereon the best Spirit of Wine, or burning Spirit of Corn, and such as is well purged from all Phlegm, that it may swim on the solution the height of two fingers. Note well, that the liquor of Niter, and likewise the burning Spirit, must be well freed from all Phlegm, so that the Spirit may not conjoin it self with the Niter, but swim on the top of it. For if both of them be watery or phlegmy, there would be a conjunction or commixion of them both, and your labour would miss the event hoped for, and this is well to be observed. Therefore seeing that such a commixtion, is prevented by removing of the aquosity, the burning Spirit will attract to it self, the true and corrected Essence of the Herb or Animal, and leave the fixt liquor together with the unprofitable Fæces of the Herb or Animal. Separate the burning Spirit thus impregnated with the Essence, and so much that it can attract no more, by pouring it off from the liquor, and pour more Spirit thereupon, repeating this labour so long and so often, untill all the Essence shall be extracted out of the liquor of the Niter. Then take all these extractions which contain the transmuted or corrected venome of the Herb or Animal, and put them together in a Cucurbit, in a B. M. and draw off

the burning Spirit with a gentle heat, that so at length the remaining liquor, may be of a thick and dark coloured reddishness. Note well that the best part of the burning Spirit may be also separated in a B. and reserved for farther use, but its remaining and weaker part may be taken out with the extract, out of the B. M. and be evaporated in a Glass Vessel, over a vaporous B. to the thickness of Honey. For in so doing, there's no fear of burning the extract in the Cucurbit, if the B. should be over hot; and this you are to have an especial regard unto. But if the evaporation cannot be done in Glass Vessels, by a vaporous B. then when the Essence is brought to such a pass in a little Cucurbit, pour thereto some of that burning Spirit, that came first over, and presently shake it well about, and mix it well, and this will again forthwith extract the purest part of the Essence, and leave behind a few Fæces, with a little of the fixt Niter Liquor, from the which, the burning Spirit together with the Essence, is to be forthwith separated, by pouring it off, lest it should (by any longer stay on the Fæces) draw also to it self the Salt, and so not get the sweet Savour and Odour of the Essence. But if any one doth yet desire to make the Essence more pure and more sweet, he may extract it yet a third time after the aforesaid manner, and after this third labour there will remain again some more Salt, and the Essence will become sweeter. If a diligent regard be not had hereunto, there will (for the most part) some of the fixed Salt abide with the Essence, and render it of an unpleasant savour: this admonition therefore is not to be neglected, but such a one that covets the obtaining of any good must bestow his labour with all kind of diligence.

This is an exact description of the manner of

preparing most efficacious Medicines, out of the most venemous Herbs and Animals. Furthermore this is to be noted, that when the Essence is extracted by the burning Spirit, out of the Alkalizated Herb or Animal, the remainder is to be boiled in an earthen or glazed Pot even to driness, and afterwards to be made red hot, that all the impurity may be consumed by calcination, and the pure fixt Niter may remain alone, which if you set in a Cellar, and do again let it dissolve into a liquor, it will be of the same virtues as before, and thus will it be many a time, and so may the Spirit of the Wine be used for the like operation.

Now although this fixed Niter doth change as well venemous Minerals, as Animals and Vegetables, and reduce their venenosity into wholsome Medicine: yet is it more fit for the sulphureous Vegetables, Animals, and Minerals, than for mercurial ones; and for such the Acid Spirit of Niter is more fit, though it doth also dissolve, correct, and transmute Vegetables, Animals, and Minerals; the which is chiefly observable in the Minerals, for therein may be learned the wonderfull property, and the all-things-changing efficacy of this Fire. For Niter crude as it is in its body, being mixed with combustible Animals and Vegetables, and enkindled, burns up all things, and drives them with the flame up into the Air, insomuch that nothing save the fixt Salt onely is left remaining: And therefore this crude Niter is altogether unfit for Vegetables and Animals, if you would have any good from them. But in the venemous Minerals it performeth its office better than the fixt Niter, or than the volatile corrosive or Acid Spirit, as shall be afterwards shown where we treat of Minerals. This I thought expedient to advise you of, and have thus done to this end, that those that are desirous of the Art may learn the divers

operations of Niter. The crude Niter doth (by its flame) display its virtues upon the venemous Animals, and changeth them in few hours space into safe Medicaments). Being reduced into a fixt liquor, it dissolveth all sulphureous Vegetables, Animals, and Minerals, the which thing the common or crude Niter, as also the acid and corrosive Spirit will never do: As this fixt liquor of Niter also dissolveth wholly the sulphureous Minerals, and leaves nothing behind save the onely Fæces. So the acid Spirit of Niter dissolveth all mercurial Minerals, that nothing remains undissolved. From whence 'tis evident, that every nature doth lovingly embrace its like, and is willingly conjoyned therewithall, and especially if such natures are pure and clean, and not mixed with any other things. But that you may yet better understand these things, hearken a little farther. There is no Herb, no Animal, no Mineral, that consisteth not of its three first principles, *viz.* Salt, Sulphur, and Mercury, but yet are these very unequal: for in one subject, the Salt is most powerfull, in another, the Sulphur, in a third, the Mercury: But when in such subjects consisting of the three principles, there is not too much inequality, and that no principle bears sway over another, then either the acid Spirit, or the fixed Salt of the Niter will alike dissolve them, as is evident in many Vegetables, Minerals, and Animals, which being compounded of well tempered Principles, do admit of Solution and Correction, both by the fixt Liquor, as also by the volatile acid Spirit: For example. I take some Herb, be it *Napellus*, or *Mandragora*, or *Opium*, or some Animal, as a Spider, Scorpion, or Golden *Scarabæus*, I deal on this Subject now with fixt Niter (as I afore taught) and the whole will be dissolved, changed, and become a safe Medicament, (for they

consist of well tempered Principles.) If now I pour upon either Subject the acid Spirit of Niter, it will be dissolved therein, changed, and corrected, and put on the nature of an wholsome Medicine, as well as when dissolved in the aforesaid Liquor. Now though both Liquors, *viz.* the fixt Liquor and the acid Spirit do arise out of one Root, yet do they exceedingly differ in their nature, and do prosecute as it were each the other with a deadly hatred: And that because the fixt Liquor, as well as the acid Spirit, are in some sort as yet adversaries, and do not absolutely bear such sway as if they were in one Nature. For they are from one subject, and are by the fire drawn out of common Salt-peter, and reduced into two contrary parts and into Enemies opposing each other. But they are again conjoined, that they may mutually set upon each other, with that enmity they have received from the fire, and may overcome and kill each other, then neither the fiery Liquor, nor the acid Spirit is any more discerned, but they return unto that which they were before, and from which they were born, *viz.* unto Niter or common Salt-peter. Excellently well therefore say the Philosophers, make the fixt Volatile, and the Volatile fixt. *Hermes* also saith, that our Dragon dieth not without his Brother and Sister, many things might be spoken of this matter, but they belong not to this place, but to the fourth part of the Prosperity of *Germany*, in which is treated of the Concentration of Gold and Silver into Tinctures, but if so be that one of the aforenamed Principles, whether it be Sulphur or Mercury (for the Salt is not to be here considered) do bear overmuch sway in any subject, then both the dissolvents cannot alike dissolve that body, but that dissolvent onely which is appropriated to the nature of that Subject: As for example. The seed of any Herb (though it hath

a mercurial Salt) yet the Sulphur hath the predominancy, and therefore admits of dissolution by the fixt Liquor rather than by the acid Spirit. But if the Oil be separated from the mercurial Salt, either by expressing it or distilling it out of the Seed, then the fixt Liquor hath a greater efficacy of operation upon its like, and dissolves all the Oil, without leaving any part thereof behind. But contrariwise, the Oil being severed from its mercurial Salt, which admitteth of the acid Spirit onely, the acid Spirit hath no power at all to dissolve it, though he be arisen from the very same Subject, as his brother the fixt Liquor is. So then the Sister answers not the brother in the like operation, and 'tis impossible for the Sister to accomplish those things that the Brother doth. But when both brother and sister are mixed together, they do again beget Children like to their Parents, *viz. Hermaphrodites*, from whence themselves had their Original, returning to simple and crude Niter, out of which there do again proceed the like Procreations and Generations of the masculine and feminine Sex. And so one birth transmutes it self into another, augmenteth and bettereth each other and that even to infinity, if it do but get its own conjugal bed, and be dealt withal in a Philosophical manner. And what we have said of the vegetable Sulphur, the same may likewise be understood of the Animal and Mineral. For such a Sulphur as is severed from its Salt and Mercury, the acid Spirit of Niter will not dissolve, but its sulphureous Liquor doth readily perform it, and this doth wholly dissolve the common mineral Sulphur, whereas the acid Spirit leaves it untouched. But such a Subject as participates of both Natures, *viz.* of the sulphureous and mercurial one, doth admit of dissolution both by the fixt Liquor, and by the acid Spirit, whether it be a

Vegetable, Animal, or Mineral. Therefore the extreams, *viz.* the beginning and the end, the first Ens and last Essentiality, the volatile and combustible, and the fixt and incombustible, are to be compared with each other, (as thus.) Let the common combustible Sulphur and which adheres to Minerals and Veins of Metals be accompted of as the beginning, and let Gold be accompted the end. The fixt Liquor now dissolves the Sulphur wholly, but cannot do so with the ripe Gold; but the acid Spirit dissolves that, and cannot at all dissolve the Sulphur. But now such as are middle Subjects and do partake of both natures, *viz.* of a sulphureous and a mercurial, such as are *Saturn*, *Jupiter*, *Mars*, *Venus*, *Mercury*, *Lune*; for they are dissolveable by both, *viz.* by the fixt Liquor, and also by the acid Spirit. But by how much the more either of them partake of combustible Sulphur, by so much the easier doth it admit Solution by the fixt Liquor. So this Liquor doth easily dissolve these Minerals, *viz.* Antimony, Auripigment, common Sulphur, red Arsenick, *&c.* and of metals these, *Mars*, *Venus*, *Jupiter*, *Saturn*, difficultly; *Lune* more difficultly; *Mercury* most difficultly; but for *Sol*, which is the last and best of all, it doth in no wise dissolve, because it is plainly freed by nature from its superfluous, extraneous, and burning Sulphur, and is washed, purified, and maturated into a most pure mercurial Substance. Contrariwise the acid Spirit (if it be strong enough) doth dissolve all, even from the supreamest metal, to the lowest Mineral, Sulphur onely excepted, which it can't dissolve. Yet doth it more easily dissolve one Subject than another according as it is of more affinity with, or remote, from its own Nature. And therefore every Chymist may easily know the Nature and Properties of every metal and mineral by the

dissolving them, with these two, *viz.* Liquor and acid Spirit. Note well, I have (by this means) found out what Metals and Minerals are of nearest Affinity with Gold, and this kind of enquiry is far more certain and safer than the reading of many Books; nor will it be hurtfull to him if he did understand the signature of metals and minerals, and thereby know how to learn their Nature and Property; but my intent is not to treat of that, in this place, but will refer my labour to the second part of my Treatise of the Prosperity of *Germany*, where we will speak of the Concentration of Metals and Minerals. But that I may trifle out no more time in the discoursing of the difference of metals and minerals, I will go on and describe how the venemous Subjects of Animals and Vegetables are to be dissolved by the acid Spirit of Niter, to be transmuted and ripened thereby, and converted into safe Medicaments.

The Process and Preparation is as follows.

Take either *Nux Vomica*, or venomous party-coloured Toads, Scorpions, Cantharides, or such like venomous Vegetables or Animals. Cut your Vegetables, but take your Animals whole as they are, that so dying (in the *Menstruum*) they become greater and safer Medicaments, put them in some glass: As for example. Take one Ounce or two Ounces of the Spirit of Niter; put it in a glass with a narrow neck, that so it may be stopped, and put into that Spirit such Vegetables as you would dissolve; which being dissolved into a Liquor, then put yet more Herbs, thus doing so long till the Spirit grows thickish, and can dissolve no more. After the same manner may you proceed with the Animals if dead; but if alive, then to the Spirit add some water before you put the

Vermine thereinto; for the too vehement force of the Spirit, is to be so allayed, that the Vermine being put in alive may not presently die, but may kill himself with his own proper Poison. For if the Spirit be too strong, such kind of Animals will die in less than a moment, and not know what hath happened unto them. But now they live longer in the milder Spirit, and when they see that they must needs die, they are extreamly enraged, do prick, and bite, and kill themselves with their own Poison, insomuch that the venome is increased, and the Medicine acquires the greater Virtues. So then those which thou hast put in being dissolved, add more untill the Spirit becoming thick, can dissolve no more; strain this Solution through a thin Linnen Cloath into another glass, and pour thereon by little and little, or drop by drop, the fixt Liquor of Niter, that it may kill the acid Spirit, and they both having lost their strengths return into Salt-peter as they were before, and the corrected Vegetable or Animal may be precipitated to the bottom in the form of a Powder. When you have so done pour on some more fresh Water, or Rain-water, that the Salt-peter may be the better dissolved. Then pour out all the Solution, through a thin Linnen Cloth placed in a glass Funnel, into another glass, that so the Salt-peter, which before was partly an acid Spirit, and partly a fixt Liquor, and is again become Niter, may (being dissolved with the water poured thereon) run through the Cloth, and that corrected Vegetable or Animal may stay behind in the same, the which by pouring on store of fair water, is to be freed of all Saltishness, and afterwards to be put together with the Cloth upon Cap-paper several times doubled. This Paper will drink up all the moisture, and the remaining Animal or Vegetable Powder will stay behind: which being thus dried is to

be lay'd up for use, and may afterwards be used either *per se* in the form of a Powder or be reduced into Pills, which before this preparation could not be safely used, nor without much danger. There is besides, another way of turning Animals and Vegetables by the acid Spirit of Niter, or by the fixt Liquor into wholsome Medicaments: and the manner thereof is thus.

Those Subjects which refuse to be dissolved by the fixt Liquor, are dissolved by the acid Spirit, and precipitated with the fixt Liquor, or contrariwise those which are not dissolveable by the acid Spirit, are dissolved by the fixt Liquor, and precipitated by the acid Spirit. All being precipitated, and the Dissolvent sufficiently slain, let some more of the fixt Liquor be poured thereupon, so that it may much exceed in quantity the acid Spirit. This done, let the Phlegm be drawn off in a vaporous B, and to the remaining Liquor, let be poured as much burning Spirit as is sufficient, that so it may by extraction extract all that is to be extracted. This burning Spirit operates upon, and attracteth to it self, no other thing save the onely Essence of the Herb or Animal alone, and leaves the Dissolvents untoucht. But this Essence is no ways inferiour neither in virtue or efficacy, to that which was prepared after the before described manner. And thus much let suffice to have been said of the preparation of Vegetable and Animal Medicaments. And now we will betake our selves (in God's Name) to speak likewise of Mineral and Metalline Medicaments, and see what good thing the Omnipotent God bestoweth on us by the benefit of these things.

The preparation of Metalline Medicaments is almost a-kin, and like to the precedent preparation of

Vegetable and Animal ones, and doth herein onely differ, that the most part of Minerals and Metals, are dissolved, corrected, and converted into safe Medicaments by crude and purified Niter, as the following manner demonstrates.

Take of powdered Antimony and purged Niter each alike, mix these equal parts in a covered Pot least the Mass leap out, calcine it, after Calcination pour it forth, and reduce the Mass into a Powder, and wash off the Salt-peter with Water and dry the Antimony, which hath now lost its black Colour, and is become white. Mix it again with an equal part of Salt-peter, calcine it, and wash it, and repeat this Labour a third time. This done, the Antimony hath laid aside all its venomosity and blackness, and become white, and such a medicament, as may be most safely administred in expelling all Diseases by Sweat, the Dose from two, three, four, even to six Grains. Note well, if you use the *Regulus* instead of the Crude Antimony, it will presently, in the first operation become a white Diaphoretick, and to be adhibited in the same Dose. Even after the same manner may you deprive poisonous Arsenick, Auripigment, and such like Poisons of all their venomousness, and transmute them into most safe Diaphoretick Powders. But forasmuch as the preparations of them do not correspond with every ones mind, yea and may easily injure the ignorant and unskilfull, my advice to such men is this, that they abstain from medling with them and betake themselves to Antimony onely, and to fix him well, for that they may use him with far more safety. But that I speak here of those most highly venomous Objects, I did it for this end, that every one might know, that even the chiefest Poisons may be corrected and transmuted into Medicines, merely by

the help of Niter alone. But he that desires yet farther to render Antimony safer and better, let him use the following preparation: Take the aforesaid Diaphoretick Antimony, fixed by the help of Niter, dissolve it up in strong *Aqua Fortis*: and being dissolved, precipitate it with the fixt Liquor of Niter, that it may settle to the bottom like a snowy Powder: Pour off the moisture, vapour away some part of the humidity, and set by the remainder that the Salt may shoot, and so will you have your Niter again. As for the Powder, dry it and wash it well with water, and it may well be styled a *Bezoardicum* Mineral, being a most excellent Medicine to expel all Diseases by Sweat, the Dose of which is one, two, three, four, six, even to twelve Grains, according as the Disease and Patient is. But I have sufficiently enough treated of this Medicine at large in my other Writings, and therefore needs not to be repeated in this place. So then all, Metals, Minerals, Stones, and whatsoever is in the World, may by these three ways be dissolved and corrected by Niter, either crude, fixed, or acid, and be transmuted into Medicines void of all kind of danger. Thou maist dissolve all the Metals (Gold onely excepted) with the acid Spirit of Niter, and if thou put thereto a little *Sal Armoniack*, or rectifie it with common Salt, then it will likewise dissolve common Gold. But the Minerals are dissolved with the fixt Liquor of Niter, and precipitated, and then washed with common water, and being washed are used to make Medicine with. They yield subtile Powders, according to the nature and property of their Metals and Minerals. The Powder of Gold is yellow, and is called *Aurum Fulminans*, of Silver, Ashy, of Copper, Green, of Iron, Red, of Tin, and Lead, White, of Antimony, white; of *Lapis Calaminaris*, *Tutia*, and *Cadmia*, Ashy: But the

common Sulphur, and all the precious and common Stones, it (*viz.* the acid Spirit) cannot dissolve, but leaves them for her Brother, the fixed Liquor to dissolve. So then what the Sister cannot do, that the Brother can perform with ease, and that which the Brother can't effect, that the Sister undertakes the accomplishment of; and what neither of them can possibly perform, we see it possible to be done, by their Father and Mother, *viz.* the crude Niter, insomuch that to this subject is a power given of doing what you please. But that I may perfectly demonstrate, that Niter is able to dissolve all the things that are in the World, and may withall shew, how those subjects, which yields not to a Solution by the acid Spirit may come under the power of the fixt Niter, I will proceed on, and begin with the common Sulphur.

Take Sulphur reduced into Powder, one part, of fixt Niter two parts, put them in a Cucurbit, pour thereon twice as much water as they both of them weigh, *viz.* six parts. Boil them about one hour in Sand, in which boiling the Liquor of the fixt Niter, will dissolve the Sulphur into a red Solution. Strain it through Cap Paper, and precipitate it by the acid Spirit, then wash it, and you shall have a white and subtile Powder, profitable in the Diseases of the Lungs. And now it remains that I shew you Flints, Sand, Crystal, all kinds of Stones both precious ones and common, (which the acid Spirit is not capable of dissolving) may be dissolved by the fixt Niter, and display their Virtues, the which is thus done. Make the Flint, Crystal, Marble, or any other Stone that is meltable in the Fire into a Glass, very red hot, and presently squench it in cold Water, and dry it, that it may be powdered with ease. Take one part of this Powder, and three or four parts of fixt Niter, mix

them well, put them into a Crucible, and cover the Pot, and melt them with a strong Fire in a Wind Furnace, that it may become a transparent Glass. Then turn it out, Powder it, and set it in a Glass Vessel in a moist Cellar, that the Stone may be turned into a Liquor; or else having powdered the said molten Glass, pour common Water thereupon, which will dissolve the Powder. If now you pour the said acid Spirit of Niter on the clear Solution, then the fixt Niter being deprived of its fiery virtue and force, will let fall the dissolved Stone in the form of a Powder, which is to be washed with store of Water, and be dried, and it will be the Magistery of that Stone, which this operation is bestowed on. These Stones may likewise be digested and dissolved in a strong Glass set on Sand, with the fixt Niter Liquor, but this moist way is more slow and tedious than the former dry way which is done by melting. And besides, the Glasses themselves cannot long endure this liquor, but are therewith also dissolved. Now these Magisteries or Stones thus prepared are profitable in the Stone, the which they do not onely expel out of the Reins, but likewise out of the Bladder, if it be not too much hardned. If you desire to make this Medicine yet better, then do thus. Take the Liquor of the Flints or Crystals, that are dissolved in a Cellar after their having been melted, put it in a Vial having a long Neck, whereon pour twice as much Spirit of Wine, but see that the Belly of your Glass be but half full; then let some body or other shake the Glass in their hands strongly up and down, and commix the Liquor and Spirit of Wine well, then will the Spirit penetrate, dissolve and render it sweet. Note well, this agitation is necessary, because if it be not thus tossed to and fro, the Spirit of Wine will stand at the top of the Liquor, and not attract

the fixt Niter to it self. Now when the Spirit of Wine that you poured first on, is sharp enough, pour that out and pour on more, and when that is sharp enough, decant that also, and pour on more, repeat this operation so often, untill the Liquor of the Stones be rendred sweet. Note well, the Spirit of Wine must be void of all Phlegm, for if there be in it any water, the Liquor of the Stones would be precipitated into a Powder. But he that proceeds well and rightly will obtain a noble Medicine against the Stone of the Microcosm.

N. B. After that the Liquor of the Stones is brought to a sweetness, it is to be covered over with the Spirit of Wine, in the Glass you keep it in, that so the Liquor may abide in its Liquidity, otherwise it will in a few days space be turned into a Stone in the Glass. When you would use the Liquor, stop the mouth of the Glass with your Thumb, and turn down the Glass that the Spirit of Wine may (as being lighter) give place for the Liquor to flow out by your Thumb, and thus may you take out as much Liquor as you please. I have been the more curious in describing this preparation in this place, that so no error may be committed, seeing this labour requires an expert Man, and not such a rude and insipid Sot as *Farnerus* is. Experience testifies that the Liquor, and the Magistery of Sand, Flints, Crystals, and such like Stones, are endued with one and the same virtues. Any one may chuse which in his opinion is best. I commend the common white Flints, that are in the Sands of Rivers. The Magistery of these are notably conducive to weak Stomachs, nor is any thing corrupted by the same, whatsoever Diseases they be used unto. The Dose of the Powder is 4, 8, 12, 20, 30 Grains, of the Liquor, 1, 2, 3, 4, even to 10 Grains. This Liquor, wheresoever it comes, adheres to every

matter it meets with, if it be kept in a dry place, it becomes a natural and transparent Stone. In Man's Body, it attracts to it self its like, and carries it off with it self. There lie hid in it many other secrets, which forasmuch as they pertain not to this place, are to be found in my other Writings. Moreover there are Stones found which do not admit of Solution either by the fixt Liquor or acid Spirit, and they are to be thus tamed. Take that Stone which yields not to a Solution by the fixt Niter Liquor, nor by the acid Spirit, beat it into Powder, then mix it with three times as much of the Powder of pure and well dried Niter. Then with this mixture fill a Crucible half full, take up a Coal with your Tongs, and put it into the matter, and hold it hard on, least the flame throw it clear out again. So the Niter being kindled by the Coal doth (together with the Stone) flame and burn up, and cause such a speedy and vehement Fire, that the Stone is thereby penetrated and opened, and may (after this operation) be dissolved with common Water. This done, the Solution which hath imbibed (or which contains) the dissolved Stone, is to be purified by passing it through Cap Paper, and to be precipitated by pouring in of the acid Spirit, that so the Stone may settle down in the form of a Powder, the which is to be washed with Water, to be dried and kept for use. Thus now have we dissolved all the Metals, all Stones, all Vegetables, and Animals, and transmuted them into Medicaments. And were there yet any other thing in nature besides these subjects, or could there be found any thing else, I would have taught its Solution by this my universal *Menstruum*. But forasmuch as I find nothing else besides Vegetables, Animals, and Minerals, as likewise all kinds of Stones, yea and Glass it self, nor can find ought besides, it will deservedly remain an universal

Menstruum, and Dissolvent (though the moamish deriders, and brethren of ignorance, and haters of the truth, split for anger) constant, unconquered, and incomparable, as long as the World stands. As to its efficacy in bettering and correcting Metals, the second, third, and fourth Parts of my Treatise of the Prosperity of *Germany* will testifie, for therein we treat of the concentration of Metals. But as for such other mysteries as concern true Hermetick Philosophy, and that lie hid in this wonderfull subject, they are accurately and succinctly described in my Treatise of the Nature of Gold, and of the concentration of the Elements, in which Book the studious Reader may delight himself with divine and humane Miracles. So now we have proved and demonstrated, that Niter is an universal *Menstruum* and Dissolvent, seeing there is nothing in the nature of things that is able to resist its dissolving virtues; nor can its like be found out. Well therefore may it most deservedly remain, as in very deed it is, and as 'tis accounted of both by my self and all skillfull Chymists. But now if any one shall object and say, that the before produced proofs are no ways satisfactory to him, neither do demonstrate that this dissolvent is also profitable as to the Philosophick Work, I do not intend to answer him, nor will I so open my Bosom to such Adventerers as *Arnoldus* did to *Lully*, but leave secret things in a secret place. I have spoken enough, and do also speak much in my Treatise of the concentration of Heaven and Earth. He that understands not my sayings, and doth as yet despise them, has no reason to reckon himself amongst the Adeptists and Sons of *Hermes*, but rather is of the rank of the *Farnerians* sodality, and must remain at the Hogs Trough.

The Use, Power, and Virtues, of the Medicaments out of Vegetables, Animals, and Minerals: The Composition whereof we taught above.

As concerning Vegetables, some few of them there are that need correcting by the universal dissolvent. For such things as are in their own nature whole and sound, need not any Medicament. For Rosemary, Fether-few, sweet Marjoram, Sage, Thyme, and such like Herbs needs no correction, but may be reduced into their sweet Essences, according to the ways that I have prescribed in the first part; but those Herbs that are more strongly operative, and used in medicinal affairs, are not without danger, such as are *Henbane*, *Hemlock*, *Mandrake*, *Opium*, *Tobacco*, *Napellus*, *Levant-Berries*, *Nux Vomica*, &c. these must be amended by a good correction, or else can they not be safely taken into the body. If they be dissolved by the fiery operative *Menstruum* and corrected thereby, (as we shewed in the foregoing discourse) then may they be taken into the Body most safely, and without any danger, and will perform things wonderfull in Medicine. And whatsoever was a Poison before is afterwards rendred a Poison subduing Antidote. For Example, *Henbane*, *Mandrake*, *Opium*, have by their nature a stupefactive power, and do suppress the vital Spirit, do infect, or destroy, the *Humidum Radicale*, do procure overmuch Sleep, yea, do close up the Life in perpetual Sleep. But now those Herbs being corrected by the force of the fiery Water, and being dissolved of their Poison, do no more hurt, but allay all inward and outward pains, do pacifie the vital Spirits being provoked and enraged, do compose all disquietudes with a sweet pleasant rest, do expell venemous humours out of the Body by Sweat, and do by reducing all things into a quiet State, heal many Diseases. The *Cicuta* or

Hemlock, *Napellus*, *Levant-berries*, *Nux Vomica*, &c. do not onely cause a most deadly Sleep, but do also provoke most vehement vomitings, and make most accute prickings in the body, and deprive Men of their Scences and understandings, and do at last bring on Death, if they be admitted into the Body in too great a quantity, and are not drawn out from thence again by strong vomitings. But such Herbs being corrected, and changing the Poison into wholsome Medicaments, do no more cause such horrible and dreadfully painfull Symptoms, but by penetrating the whole Body in a harmless and insensible manner, do take away all obstructions, and cast forth all hurtfull things out of the Body, by sweat, urine, and stool, and frees the inward bowels by purging them from all impure humours, and do happily take away occult Diseases. And now if they did before load the head with a very great heaviness and render it mad and unsound, it doth now mundifie it, and purge it, and free it from grievous and obnoxious Vapours, and do comfort the Brain and make Ingenuity or Memory better. So that what they did corrupt (before their correction) they do now (after their being bettered) amend and refresh it. But however you are to have good regard, that you be carefully provident in the use of these Medicaments, that you exceed not a due measure, and so commit an errour, for it is not lawfull to play with such kind of penetrative Medicaments.

The strongest purgative Medicaments, as *Esula*, *Cataputia*, *Stavesacre*, *Gummi Gutta*, and such like, being dissolved in this *Menstruum*, and precipitated, do lose their vehement, and as it were venemous quality, and become safe and gentle purges. *N. B.* You are here to observe (as concerning this Solution) that forasmuch as the Seed of *Esula*, *Cataputia*,

Stavesacre, as likewise *Guttæ Gambogia*, and *Scammony*, are of a fat and resinous nature, are not to be dissolved with the acid Spirit of Niter, but with its fixt Liquor, or better with the Spirit of Wine corroborated and alkalizated by fixt Niter, and to be precipitated with the acid Spirit. And so with the same Spirit of Wine, being made more strong by the addition of the fixt Niter, all Gums that have a fat quality (may be thus dealt with) and contrariwise such as are not fat may be dissolved with the acid Spirit, and precipitated with its contrary Liquor. So likewise all bitter Juices, as Aloes, Myrrh, and the like, being therewith dissolved and corrected do acquire a more sweeter and more gratefull Savour. It is also very fitting, for the grievously smelling Gums, as *Assa Fœtida* is, and for correcting other such like stinking things arising from Animals or Vegetables, and so spoil them of their grievous Odour, and for correcting them into a gratefull smell. Insomuch that some things that emit even almost an ungratefull stinch may be so transmuted as that they may afterwards yield a pleasant smell. And although that I made some mention of this Work or Operation some years ago in the first Book of my Philosophical Furnaces, where mention is made of the Spirit of Salt, yet will I not leave it off so, but describe more, yea and compendiouser ways too in my third part of the *Spagyrical Pharmacopœa*, for effecting such matters, and thereto refer the studious for the preparing of pleasant and efficacious Medicines.

As for such Animals as serve for the Kitchin, as Beef, Mutton, Pork, Hens, Geese, and such like, also Fishes and Birds, they need not much correction. Those of them that are a year old or more may be boiled with Water, Salt, Spice, Wine, and Vinegar, *&c.* the younger may be roasted on a Spit. These are

not hurtfull to such men as are in health, if they feed on them and drink after it a good draught of good Wine or Ale, that so they may thereby wash down into the Stomach any such matters as might stay by the way in the Throat, *&c.*

If now any one would make use of venomous Worms, and Insects in Medicines (for sometimes they perform far more in Medicine than Vegetables can, as experience witnesseth) they are not to be adhibited without correction. But I do not here understand the Kitchin correction, which is done by Wine, Sugar, and Spices; but such an one as in which all the parts remain together, and are corrected and amended by the fiery *Menstruum*, and that without the addition of any other thing as we taught before. And being on this wise corrected, they do not onely safely conduce to a Medicinal help in desperate Diseases, but do also become of greater assistance and comfort to many a sick Person, and purchase to their Authours a greater honour. It is well known even to blind Bayards and Barbars what effects sometimes the great Earth-worms, *Scarabœus's*, *Cantharides*, *Aselli* or Pigs-lice, and suck like Urine provoking Insects do effect, being administred to the sick, crude, dried onely and so powdered; he that desires to procure a good quantity of Earth-worms, let him but thrust a stick into the Earth, and stir it to and fro thereby to disquiet the Worms, for they will presently guess that the devouring Mole is at hand, and will for fear creep by heaps out of the Earth, so as you may then easily take them. If any one loaths the Worms themselves, let him take that Earth which the Worms do cast out to the top of the ground, after a warm Rain in the Spring time, and is like small bunches; as if they should say, give us our lives for this Earth's sake; and from thence you may extract

an Essence, which will be as profitable to you as if you took us: *N. B.* The *Merulæ* or Blackbirds seeks after this Earth and carries it to her young ones lying in the Nest, which thing they would not do, did it contain no good in it, but would rather take the Worms themselves and carry them. A Dog which hath devoured many bones seeks out for some clean place to dung in, either on a smooth stone, or on the grass, as that he should say, This do I give you by way of thankfulness for the food which you have bestowed on me, keep it and use it according to your knowledge. *N. B.* The greatest Vertues of Animals are placed in their Excrements, and not in their flesh. Next the Excrements are the superfluities of the bodies, which (in men) are, the Hair, Teeth, and Nails: In Beasts, the Hairs, Teeth, Hoofs, and Horns: In Birds, the Claws, and Feathers, *&c.* And that the *May* Worm frees from the Gout and Stone, See Doctour *Wierus*, he hath written a peculiar Treatise of the Gout, and of the wandering or moveable pains of the Joints, and of the intrinsecal and hidden Scurvy, and other such like Diseases, and which are commonly accompted of as uncurable; all which he teacheth the removal of, by the means of the *May* worms, or unctious *Scarabœus's*. Nor indeed is it without ground, that there is sometimes more effected by such abject and contemptible Vermine, than by the most precious and highly esteemed Compositions and Vegetables: This now they do crude as they are, and uncorrected. But if the great Earth-worms, and principally their Enemies, *viz.* those black, smooth, and many footed Vermine, that suck from the Worms their Juice and Strength; and likewise those broad, and party-coloured, venereous small Vermine, which we have before mentioned (if all these I say) be corrected by the fiery *Menstruum*,

they would not onely drive forth Urine, and the Stone, safely and without hurt, but would withal most notably strengthen the nature of Man, and be a great comfort to many debilitated Gallants. The green *Scarabæus's*, the *Cantharides*, and green Flies, being all of a venereal Nature, do (being corrected) not onely drive forth the Stone and Urine, but do also wonderfully shew their efficacy in the Feet Gout, wandring Gout, and other grievous Diseases which have already gotten deep rooting: But that black and slow creeping *May* worm, or unctious *Scarabæus* doth operate the most efficacious of them all, and may be plentifully enough had in the Months of *May* and *June*. The whole knack of the business doth consist in this, that such Vermine be well corrected with the Liquor Alkahest, and so prepared before they be made use of. As for those great and horned *Scarabæus's*, that live upon the Juice and Rosins of Nuts, Cherries, and Plums, and are wholly of a Balsamick Nature, if they be corrected, I do highly encourage the use of them both inwardly and outwardly, *viz.* when the internal and external Members are tormented with most vehement pricking Pains and Torments. As for Emmets or Ants they have a wholsome and efficacious Balsam, and are healers both of inward and outward Dolours. But the chiefest of them are those that live in Woods wherein are store of Pines, and Fir-trees, and do there feed upon the Rosins of the Trees, and do not as the others do, live upon leaves and grass, but do in the Summer Months store their little Holes with the small Grains of those Rosins for their Winter food. And this the Inhabitants of those Woods know full well, and do seek after it and sell it the Druggists instead of Mastick. For it answers to the Mastick that comes out of *India* in efficacy, vertues, form, and

odour, and haply we might not need that Gum, knew we but how to get and use this. There is great variety and plenty of such like Insects as these, which without all question may be of great use in medicine; but seeing they can't be gotten in such plenty as the Vegetables and Minerals may be, the use of them is forborn, and rarely are they sought after. Nor indeed is it necessary to seek after and fetch from far, such things as we have present before our Eyes. The drift of my writing is this primarily, that I may demonstrate, that there are in the universal *Menstruum*, such vertues as are able to correct all venemous Animals, and deprive them of their Poisons, and to convert them into wholsome medicaments, for the honour and renown of it, was I even constrained to write these things. And as to its energetical Operation on venemous Minerals, it is sufficiently enough known, and doth most clearly appear even in its effect upon Antimony alone, the which being burnt twice or thrice with common Niter, is wholly deprived of its blackness, and cloaths it self with a most white colour, and becomes a Diaphoretick and an all-evil-resisting Powder. So is it too with Arsenick and Auripigment, those most vehement Poisons, which may be so changed in a few hours space, as that they may be taken afterwards into the Body without any hurt or danger, and will subdue and expel the greatest Poisons, though indeed there's no necessity of making use of those venemous Subjects, seeing there is plenty enough of other means. 'Tis sufficient that we have shown, that Niter hath such notable vertues, as to be able to invert the venemous Nature of every Vegetable, Animal, and Mineral, and of transmuting the Poison into a wholsome Medicament. Now because the Animal vertues are more efficacious than

the Vegetables, and that the Minerals exceed them both, therefore by good right are those Minerals of greatest use in medicine, which be most efficacious, most sweet, and most safe. But yet we would willingly have the Animals and Vegetables to retain their own dignity and station: And for the better discovery of the difference betwixt these, and that my Neighbour may be the better and more sincerely served, necessity doth even require a larger explanation. This therefore is generally to be observed, that by how much the riper the Minerals be (and so 'tis with the Animals and Vegetables) by so much the nearer they are to the Sun, and abide therein, so much the safer and securer may they be taken into the Body. All Herbs, Vermine, and Animals, that delight in a warm Air, and love to abide therein, are never infected or impregnated with so great a Poison as those are that delight rather in obscure, shady, and darksome places. For *Napellus*, *Mandragora*, *Cicuta*, and such like Herbs are never, or at least most rarely, to be found in other than dark places that are shaded over. And so the most venemous Animals and Vermine, do most willingly take up their abode in holes of the Earth, in cold and darksome Dens; and by reason of the want of the warm Air remain venemous, and do necessarily hurt mankind. But being digested by the Liquor of fixt Niter, they deposit their venemous quality and become wholsome Medicaments. So then all the maturation of things consisteth in heat, but Poison consisteth in cold, witness Wine and the Fruits of Trees, the which being ripened by the solar heat, men may feed on them without hurt, but if they be eaten raw and unripe they corrupt their Stomachs. Now as we have said of Animals and Vegetables, the same is also to be understood of the unripe minerals

and metals. By how much the unriper and cruder they be, so much the more do they hurt, and are unfit for the making of medicine. And as for metals, they do by little and little, and step by step go on towards their perfection, and end: Like as an Infant doth by little and little arrive to its highest degree of age. And as there is more to be found in a man that is arrived to man's Estate than there is in an Infant, so is there in minerals and metals that have in long success of time attained to their maturity. And forasmuch as in them may be found, most safe, sweet, and efficacious Medicines, I have deemed it necessary briefly to detect their dignity and degrees, and shew the Ladder as it were, or Scale, wherein the metals stand in order, and how by their signature that perfection which they have gradually arrived unto, may be known. I do resemble the mines of metals to a Tree, thus, *Saturn* is the Root, *Mars* the trunk or body, *Jupiter* the bark that covers the Tree over, *Mercury* the Juice that sticks between the bark and the trunk, *Venus* the green leaves, *Lune* the flower, and *Sol* the fruit. The ancient Physicians or Naturalists, compared the seven principal metals with the seven Planets, the which comparison squares notably well with them. For the Planets and Metals have a mutual correspondency with each other. The Chymists ascribe Lead to *Saturn*: Tin to *Jupiter*: Iron to *Mars*: Copper to *Venus*: Quick-silver to *Mercury*: Silver to *Lune*: and Gold to *Sol*: And even as the Planets do excel one the other in brightness, vertues, and other things; even so do the metals, and this their nature informs us of, and their different signature demonstrates. Verily when the ancients would mark out to us a perfect thing, they described it under the form of a round Circle: And by how much imperfecter the thing was, by so much the less

rotundity did they give unto it. The Character of the Sun is *Sol*, *viz.* a Circle with a point in the midst: The Circle denotes the Golds perfection, the point in the middle of the Circle signifies the Original of perfection. The sign of Silver or the Moon was this *Luna*: which consisteth of two half Circles, and tells us of its half perfection: So is it with the other signs, and signatures of the other metals. How much the nearer they approach to a roundness, so much the nearer are they to perfection, and so on the contrary. The Sun being the noblest amongst all the Stars, doth also yield and make the noblest metal, *viz.* Gold, the which is likewise to be observed of the other metals. But by how much perfecter the metals be, so much excellenter are the medicaments that proceed therefrom. *Saturn* or Lead, is not much profitable for the inward use of the body, except it be in the Plague, and in other most hot Diseases. Being outwardly applied it dries up the moist affects of the body, and moist Ulcers, and healeth heat and all the external affects arising thencefrom. *Jupiter* or Tin is somewhat hotter than *Saturn*, but yet is withal very dry. *Mars* or Iron is hot and dry. *Venus* or Copper is hot and moist. *Mercury* or *Argent vive* is hotter and moister. *Lune* or Silver is of a midling heat and moisture. *Sol* or Gold is at length of temperate heat and moisture. If now any good thing be made our of Gold, it corroborates the heart as being the most noble member of the body of man. And so in like manner, Silver doth the brain: *Argent vive* the Liver: Tin the Lungs: Iron the Gall: Lead the Milt or Spleen: and Copper the Reins. Thus have the ancient Philosophers and Physicians distributed the metals and distinguished them, the which I leave as I find it, though perhaps some of them may yet admit of another distinction. But so long may they remain (as

they are) until *Elias* the Artist, shall by his coming release us of our Errours. Amongst the Minerals Antimony is the chiefest, in whom the Vertues of all the Vegetables, Animals and Minerals, are collected and concentrated into one, as its signature declareth. For the Philosophers have signed it with a round Sphere (by which the Earth is deciphered) and on it a cross put, and is without doubt for this reason, because the Earth never produced any fitter Subject for medicine, and this is attested by all true Chymists, as may be read in their Writings; but especially in *Basil Valentine*'s triumphant Chariot of Antimony, being a Treatise he wrote in honour of this Mineral. The same thing doth that Philosopher testifie, saying, common Gold and Silver doe not effect it, but their first Ens does it. Now that Antimony is the first and true genuine Ens of Gold, is not onely testified by all the Philosophers, but also daily experience it self witnesseth the same, from whence it is as clear as Noon day, that Antimony is rarely to be found in any other places but in Gold Mines, nor is there (besides) any Antimony but what is pregnant with Gold, but yet some Antimony contains more Gold and other some less. Nay farther, amongst the very Veins of Gold it self is Antimony often met with, and may therefore undeservedly be stiled an unripe Gold. I my self have seen a piece of golden Vein, which was digged out of the Gold Mines, and contained some pounds weight, in one side there was pure Gold, mixt with the hard Flint, on the other side was a black Vein of Antimony. There is a place in *Germany* called Gold Granack, nigh which in the *Sudetis* Mountains called *Fichtelberg* by the *Germans*, was found heretofore much Gold, but now at this day is there digged out onely Antimony, cleaving on to the hard Flints and Rocks.

And herewithal is immixed a golden Marquesite, which being separated therefrom, and prepared after a due manner, becomes a most excellent Medicament, of which we shall hereafter make mention. Further, had we not this testimony of a daily experience, yet have we the witness of the true Alchymy, which doth most assuredly affirm, that true Gold may by the help of Art be extracted out of Antimony. Nay more, this incomparable Art, doth not onely perform this, *viz.* of bringing Antimony to the true ripeness of Gold, but doth also so change the Gold (by extracting its Soul) that it is no more Gold, but is plainly indistinguishable from any *Regulus* of Antimony both as to the form, volatility, nature, and properties of the same. And although an infinite number of men will contradict these sayings of mine, yet shall they never draw me from this my opinion, for I believe but what my Eyes have seen. One Eye-witness is of more value than ten hear-say ones. Such as do gainsay these things, do build on no other foundations save such as they have gotten by reading or hearsay, and what will not at all correspond with experience. Well, I will remain stable in my opinion and in very truth demonstrate, that there is no subject to be found in the nature of things, that may be preferred in Medicine, before Antimony, so that it be but duely brought into its true Essence. I confess that whilst it is crude and as yet unprepared, it is a mere Poison, and the use thereof is accompanied with a great deal of danger. And such as do use the common glass of Antimony, and other Medicaments made thereof after a rude manner, and so hurt the sick, must impute the blame to themselves and not the Antimony.

I have mentioned in my *Miraculum Mundi*, and in my first part of my *Spagyrical Pharmacopœa*, the

preparation of a Medicine out of Antimony, and have called it a *Panacæa*. This now out strips the capacity of very many rude and ignorant men, to whom it seems unlikely and impossible, that a Medicine of such wonderfull efficacy should lie hidden in so contemptible and base a thing as to deserve such a Title as a *Panacæa*: but especially seeing some unskilfull men, have instead of it, administred to the sick crude Antimony, and by saying it is my *Panacæa* have with a wicked boldness deceived men, and have hereby brought an *Odium* and contempt amongst very many men, upon this true Medicine of mine. Amongst these is that faithless *Farnerus* none of the least, yea rather is more eminent or standard-bearer to the rest, and such a one as may rightly be termed the blot and scandal too of other men. For my part, he that lists may persecute Antimony with as much hatred as he pleaseth. But whereas I have already praised it, and the thing doth withal concern my Neighbour's profit, I could not omit yet farther to magnifie and exalt it with greater praises, and in very deed confirm this truth, *viz.* that such a Medicine may be made thereout of as I have described, and therefore every one that judgeth of the truth without prejudice must confess, that there is not a better, an effectualler, or a more harmless medicament, and purchasable by a meaner price, insomuch that both rich and poor may enjoy the same, if so be it be but prepared and used as it ought. But that he who is studious after good medicaments may withal see, that I have not spent my labour altogether on Antimony, but on other Subjects too, I will adjoin the description of the preparation, use and efficacy of other Subjects, and will take care for the preparation of those medicaments for the benefit of mankind, and of the

sick, and for the distribution of them amongst the needy. For by this means shall I satisfie my conscience and shall not be accused thereby of burying the Talent given me, out of envy and hatred to my Neighbour. And whoever he be that hath any good thing, let him make it common, and being moved with pity and commiseration become serviceable unto his Neighbour. But if he neither hath, nor knoweth ought better, let him desist from contemning this, and omit despising the things he is ignorant of. And let him not deprive the miserable poor sick people of such things as himself cannot give, that so he may remain an honest and pious man. But as touching the Medicaments, which are here treated of, they are indeed but few, however they are such as may next God be safely confided in.

I have formerly written of preparing a *Panacæa* of common Antimony, and taught its way of making. But whereas the description is dispersed in divers tracts, and is obscurer thereby, and haply one man may not have all those Treatises, I have judged it expedient to repeat that description in this place, and to mention it in this Treatise.

The preparation doth for the most part consist in the Calcination by Niter, which corrects and changeth the venome and immature Quality of the Antimony. Then afterwards the pure part is extracted by Spirit of Wine, and becomes a tender and spadicious (or light-red) Powder, and can effect those things, which I do here ascribe unto it. It may be taken in a morning before you eat, either in Wine, Ale, or some hot Broth, or in a soft poached Egg, or roasted Apple, and fasting some hours after it untill its operation be finished. The Dose is ¼ or ½ of a Grain, or 1, 2, 3, or 4, Grains at most for one time,

regard being had to the Age and Disease, concerning which, the well minded Reader will find more written, in the first part of this *Spagyrical Pharmacopœa*, and in my *Miraculum Mundi*, but yet I will here likewise annex it for the benefit of the sick.

Of the common use of this Medicine.

This Universal Medicine may safely and without any kind of danger be used in all the natural Diseases of new born Infants, as well as in those of years, and strong people, and may be used I say without any danger, and in so small a dose as may not move in any one either a loathing or a nauseate, as these large Cup-fulls of the common Potions are wont to do when they are drank down. For that dose exceeds not 1, 2, 3, or 4 Grains at the most, and may most easily be taken down in a spoonfull of warm Broath, Wine, Ale, Water, or Milk, as the necessity of the sick requires. For if this prescribed dose be observed, it operates after an invisible manner, and strengthens the radical Moisture, and purgeth and expelleth out after a wonderfull manner, every hurtfull thing (by little and little) out of the whole body, if it be daily used, (or every second or third day) once each day according as the condition, or necessity of any one requireth. It defendeth every body from all hurtfull Causes and Diseases, and admits not the least venomous Air, but if the Dose be augmented, it doth also display its vertues, by a visible operation, and drives out by Sweat and Urine, or Spittle, sometimes upwards and downwards, every noxious thing, and operateth even as you will have it, according as your dose is either more or less, and as your Disease needeth. A dose that is very small and void of any visible operation, is wont to heal many Diseases, yea and the greatest part of them. But some Diseases

there be which have deep rooting, and do therefore require a visible operation, forasmuch as they cannot be expelled with a small and invisible operating Dose. Every one therefore that prepareth and administreth this Medicine, must accurately observe this direction, that so (having regard to the Disease) he neither exceed nor come short in the administration of this Medicament, but by a right using of the same, he may obtain praise and glory.

But that the whole matter may be the better and more clearly apprehended, I will set down the use of the said Medicine, according as my self have experienced it, in the most grievous Diseases, that so the sick may be instructed and helped, and the less Errours committed.

In the Plague and other raging burning Diseases, and contagious Feavours, this Medicament doth (next God's help) preserve every one that takes it daily, in this proportion, *viz.* to Infants ½ a Grain, to those of a midling Age, 1, 2, or 3, at most. But if any one be infected by either of those Diseases, then the dose is to be doubled according to the parties age, or trebled, that the sick being well covered may sweat. If one time sufficeth not to free him of this Disease, the dose of the said Medicine may be repeated the day following, or the third day, and so is it to be proceeded on with, till the Disease being weakened is cast forth.

This way of preservation and curing is not onely to be observed in the Plague, but in all contagious Diseases that assaults with heat or cold, and in all kind of Feavers whatsoever. The sick need not any other Medicaments, for this is powerfull and effectual enough; provided you pray seriously therewithal, that it may (by the help of God) drive

away that abominable and detestable Disease the Plague, and the pricking paining Pleurisie, with the other Feavers. Nay farther, there is no Medicament, no not of the best that performs what this can.

In the Epilepsie, or Convulsions of Children, of whom a great Number destitute of such help die, this *Panacæa* is a most experienced and certain remedy for them, and is to be administred to a little Infant presently after its Birth, the quantity of the ⅛ part or ¼ part of a grain, in a little Milk, or else in some warmed fresh Butter, and is to be repeated again the third and eighth day following. But if it should be so, that after some days, weeks, or months, the fits do again come, then let your Dose be somewhat stronger if the Child needs it, and be so often reiterated untill the Disease be wholly subdued and carried off. I do most highly commend this Medicine to all Mothers, for that abundance of Infants (otherwise healthfull and sound enough are without any help, snatched away by the violence of Death. And here the error of some Physicians deserves to be taxed, who administer to the poor little Babes, whole Glassfulls of the Water of Pearls void of all kind of Virtue. Also the Powder of *Bezoar* Stone either with, or without the Water, together with the infusion of such like unprofitable things.

Such Men as are of riper years, may daily use the Dose of one, two, or three grains, and it will profit them. If not daily then may they repeat it every third or fourth day at least, and so continue untill the Disease being subdued pass away: 'Tis needless for them to use any other kind of thing, onely to observe this direction, *viz.* that day that they do use this Medicament, let them shun the cold Air, and abstain from Food three or four hours at least.

In the Leprosie, and other like detestable Diseases of whatsoever name they are called by, and in every kind of Scabbiness, there is not to be found any Remedy, whereby those affects are more easily and without any trouble or labour, taken away better than this, which never fails your hoped event, provided the sick be so strong as to brook the Cure.

In that detestable and venemous Disease of Whoredom usually called the French Pox, there is nothing can be administred safer and securer than this Medicament, if the Dose be but so much augmented, as not onely to cause Sweat strongly, but also to provoke Vomits and Stools; and you are so long to go on with using this Medicine every other day, untill the Sick be well, which may be in some eight or fourteen days.

He that is overwhelmed with the Dropsie, may take one Dose every Day, and forbear eating (for some hours after the use of this Medicine, (the which is necessary to be done in other Diseases also) but let him that takes it so as to work strongly, proceed gradually from one grain to two, &*c.* untill it causeth a kind of nauseate (but without vomiting) in as big a Dose as is needfull, and as the Patient can well bear. Which being thus done, the Dose is afterwards to be lessened one or two grains, and the lessening to be continued untill all the Water be cast forth by Sweat, Urine, and Stool, and the Sick become as healthy as he was before. Nor is there any reason why any one should doubt of radically taking away this Disease, (except it be plainly deplorable or desperate) by this my *Panacæa* onely, forasmuch as experience demonstrateth it more clear than the Noon-day Light.

In the Gout (a Disease accounted by the common Physicians for incurable, as well as the Leprosie and

Dropsie) doth this Medicament perform wonderfull things, and doth effect more in a short space of time than any one would either imagine or believe, provided it be rightly administred. For it doth in a short time draw back the affluence of noxious humours, and brings them forth out of the Body after an invisible manner; so that, Day after Day, the pains do by little and little remit and abate, the tumours lessen, and the Fit becomes more tolerable, comes the slower, and at length vanisheth for altogether. As for the Dose, you are to observe the same instructions that we gave you but now for the Dropsie, *viz.* that you daily make the same addition unto one grain so long till you cause a nauseate (but no vomit) and then must you again lessen it one or two grains. The Patient must do thus daily on a fasting Stomach, (and keep himself warm and abstain from Food four hours, after the use of this Medicament) as long as need shall require. Haply the things which I here mention, will meet with many incredulous Men, and such as will not believe it possible, for such a Disease as hath been hitherto esteemed incurable by almost all Men, to be rooted out by the aforesaid Medicament; the Opinion of such Men I confess that I cannot take in bad part, forasmuch as even I my self was but a few years since (before I had experienced the wonderfull efficacy of this Medicament) of the very same Opinion. But after my experience had taught me to judge otherwise I do truly and faithfully affirm, that this Disease is in no wise incurable, but may (provided it be not too inveterate, and that the strength of the Sick, either through old Age, or Debilities, hinder not the Medicines operation, or that God himself withdraws not his own blessing) by a good and sutable Medicament, be, if not radically

rooted out, yet for the greatest of it expelled. Now it is not to be thought, that he who useth this *Panacæa* may be at his choise to live as he list, *viz.* either soberly, or to stuff his Stomach daily with hurtfull and forbidden Food, and to swallow in Wine as he pleaseth. No such matter, such Men err most hugely, for even the Philosophers Stone it self, that is, the so much famed rooter out of Diseases would not help there. For whatsoever those most excellent Medicines do mend in the Fore-noon, and correct, the After-noons Surfeiting and Gluttony, and the so large excess of Meat and Drink, will again destroy and corrupt. Nor is there any room for the Opinion of those Men that think to be freed of this Disease, by a bare Abstinence from Wine: No, this Disease comes not always from drinking of Wine, for it is most evidently known, that sometimes even the poorest of Men that never drank Wine are afflicted with this Disease. And therefore the fault is not wholly to be imputed to the Wine. Every kind of repletion or overfilling whether with too much Wine or Ale, may procreate and encrease a Disease, but that is not the onely or sole cause. For there are many other causes, from whence this Disease is wont to arise. Verily, often being wrathfull doth most vehemently disturb the Family, as it were, of the internal Bowels. Lust, and an often use of Venery (which is the usual attender and follower of Drunkenness) doth vehemently enervate and debilitate the strength of the body. From hence nature being enervated and debilitated, is not able to expell out of the body the copious relicts and excrements, remaining of the too much abundance of meat and drink, and therefore those excrements abiding in the body and exercising their powers without controll, do produce most grievous Diseases. For that part which nature is

weakest in, there doth the Enemy make his first attempt, according to the usual *German* Proverb, every one climbs over the Hedge in that place where it is lowest. The same doth for the most part fall out in the procreation of this Disease, *viz.* when the body is loaden and filled with overmuch Food and Drink, for the body being overwhelmed with overmuch Wine, and then an immoderate coition or act of venery presently following thereon, doth most exceedingly weaken the body. For nature being by this means weakned, hath not strength enough to expel those remaining excrements, which soon get Head, to the great hurt and detriment of the whole body, and do make themselves a fixed seat, the which is to be well headed in this Disease.

Besides this Medicament doth resist all the obstructions of the Milt and Liver, (which corrupt the Blood, and stir up most grievous Diseases, as the Scurvy, Joynt-Aches, Erisipelas, continued Headachs, weakness of the Limbs, a Stinking Breath; and in Women a suffocation of the Matrix, a suppression of the Months, panting of the Heart, Swounings, the Lipothimy, and many such known, and unknown Diseases) far more efficaciously than all other Medicaments do. All these aforementioned Diseases are healed by the said Medicine, being taken oftner or seldomer every Week according as the Disease is, and you will see wonderfull effects produced.

I commend also this Medicament to all those that employ themselves in Surgery, that they respect it as the chiefest Remedy that they can get. For being daily given in a small Dose to those that are wounded, it heals all new wounds in the Flesh, without the assisting help of any vulnerary potions, and external applications of Emplaisters that are

compounded of so very many simples. For it withholds all Symptoms, and advanceth healing even from the very bottom, and so to the external parts, and doth also consolidate; but this is to be understood of those wounds in which are no hurt or broken bones, for as for these the manual Art is requisite, which may again set the Bones in their due order and place. Likewise deep Stabs are to have Tents used to them according as the Chirurgeons order is to apply them. But no external thing need to be used besides, save onely the Patients own Urine and Salt-Water, wherewithall the wounds are to be washed, and after washing, to be covered with pure or clean Linnen, that the coldness of the Air hurt them not.

But if wounds be dangerous and over great, then may also be applyed some vulnerary Balsam, and Plaisters made of the Flores of Minerals and Metals, and done up with Wax, Turpentine, and Oil: (Such Emplaisters I have taught the composition of in my other Writings.) So that there's no need of so many Oils, Unguents, Emplaisters, and such like, to be applyed to new wounds, if this medicament of mine be daily administred to the wounded Patient.

This medicine doth operate even to admiration in open Fistulaes, rotten and stinking Ulcers, nor is there any need of outward remedies, save haply some Mineral Balsam to keep the Ulcer clean, and some Plaister made of common Wax and Turpentine to keep off the cold Air. For this Medicament doth begin its healing even from the very bottom, and carries it on very successfully even to the outer Skin, and doth throughly consolidate and perfectly cure all Ulcers, without any other external remedies than aforesaid.

Having then well considered these things, and that every one cannot prepare the prescribed Medicine, and yet very many may be found that would willingly partake of the same; It seemed good unto me to adjoin this admonition, that they that know how to prepare it, be entreated not to count it burthensome, but rather being moved by a Christian compassion, readily make such as are ignorant of the manner of preparing it, partakers of the same; And not to mind wholly their own profit, according to the custome of this perverse world, and the scraping up of store of wealth, but to be well content with an honest and just reward for their charges and labour which they have bestowed. And forasmuch as the often spoken of Medicament, if sent abroad either in a Liquid form, or in the form of Powder, into other parts, cannot be in due manner used by every body, because an Error may easily be committed in the measuring of Drops, and in weighing of Grains, and so more or less be given. I have therefore deemed it very necessary to reduce it into Pills, that so the less Errors may be committed in its administration; and one Pill weighs one Grain, and two Pills two Grains, and so on; so that the Patient needs neither to measure or weigh, but onely to use them as the disease requires, and as I have before prescribed, 1, 2, 3, 4, or more Pills at one time.

These now are the principal Vertues of my *Panacæa* made of Antimony. As for the rest that are besides these, and are (for brevity sake) omitted, they may be easily understood and known by every Judicious man, from the before described circumstances. I do therefore yet again testifie, that all the things that I have ascribed to this Medicament, yea far more than they, can be done and effected thereby, if it be rightly prepared and

administred; And principally, if the Name of God be seriously invoked. For prayers and a trust in God do strengthen every Medicine, and make it happy by his benediction, though the wicked will neither believe it, nor hearken thereunto. Indeed some Medicament may, by God's permission, restore one (without prayers) to his former health; And so may Bread allay hunger without giving thanks, and this we see daily done amongst the unreasonable Creatures: But this enjoying of the gifts of God is bestial, and not humane. But this now is truely Christian-like when (in our diseases) the help of God is invoked, and then after that, the Medicine used. And this way of using of Medicaments is necessarily accompanied with an happy event. But if thou wouldest perswade thy self, that every Disease, how inveterate soever, may, by the help of this Medicine, be certainly removed without any difference, thou extreamly errest. For we speak here of those Diseases, natural Remedies are able (by God's help) to heal. For sometimes Man's inward bowels or parts, are so stuffed and obstructed with gross humours, that they cannot be freed by even the most efficacious Medicaments. Sometimes the Lungs and Liver are almost wholly corrupted, e'er the true place of healing is sought after. And who, I pray, is able to restore the things that are lost? For Man's inward bowels and principal members do not again grow, being once lost, as the Crab's shells and Spider's feet that are broken off and lost, doe. Farther, sometimes God inflicts a disease upon a Man, whom he will not suffer to be cured. Such like Diseases as these cannot be taken away with natural remedies. With God all things are possible; who alone is able to bring help and remedy in such kind of diseases, whensoever pleaseth him? but besides him alone none can help. There are

therefore some incurable diseases, which cannot be cured by any *Panacæa*, yet not the Quartane, Leprosie, Gout, Epilepsie, and Dropsie, as most men think, though Experience (or the being put on trial) should witness the contrary. And although that all humane diseases be, in process of Years and Ages become worse, and more troublesome, and doe, together with the augmentation of sins, encrease; Yet the most bounteous God hath also bestowed thus much, that there are more and more efficacious and natural Remedies to be found out (by the Divine instinct) by diligent men.

It happened some few years ago, that an honest man's child, of about some ten years old, had its Tongue perforated with many Exulcerations, which pained it very much day and night. To cure which, the Parents spared for no costs nor pains, and consulted with divers of their neighbouring Physicians, but they used all their Labour and Skill to no purpose, for the Exulcerations daily encreased with much pain, and grew worse and worse; and the poor child, being destitute of all help, wasted away. Then, at last, they called me to advise with them, and having told me how many, and otherwise famous Physicians, could not by all the labour and pains they bestowed for full two years do any thing to the purpose, but had at last left the poor child destitute of help and succour. I seeing the effect, considered that this was nothing else but a Corrosive Catarrh arising from infected bloud, which did so possess the Tongue, and perforate it, and was the cause of this burning, eating, and cancrous effect, and so hitherto refused any kind of healing, and gave the Parents such an answer, that in my opinion there was no better way to meet with this evil, than by some purging Minerals, which were capable of

working, upon even the fix'd humours, and of bringing them away, and that to be done principally by an Antimonial Vomit. The Parents assented to my opinion, and requested me to begin the cure, the which I did, and first I gave a small Dose of my Antimonial *Panacæa*, not doubting but that it would stir up one Vomit at the least; but yet it fell out otherwise, for there succeeded no sensible operation at all: The following day I gave again the same Dose, but without any sensible operation too, but yet nevertheless all the pain vanished, and the Child could again move its Tongue, and use it, and also ask't for Meat, which it had not done in a year before, but was forced to be content with Broths, because its Tongue could not brook any solid food. The third day I administred the same Dose again, and so the Exulcerations began to be consolidated, and all the whole Tongue was throughly healed in eight days space, insomuch that there scarce appeared any place where it had been ulcerated; and the Child daily grew better and better, its natural Colour returned, the which drew all that knew it into admiration as well as my self. By this Cure that I have told you of, the vertue and efficacy of my *Panacæa* did farther manifest unto me what I knew not before to be in it, nor should ever have believed it, (had I not perceived a manifest operation) *viz.* that the Bloud should, by the help of so little Medicine, which was not in all above six grains, be able in such a short space of time to effect so much; And afterwards I perceived the same effects in other Diseases likewise, and found that the daily use of this Medicine did not onely shew its operation upon the Tartar in the Reins and Bladder not as yet coagulated, but did by little and little lessen the already hardned Sand and Stone, and in length of

time expell it: And did also in success of time resolve and root out even Podagrical inveterate humours.

But thus much may suffice to have been spoken of the common Antimonial *Panacæa*. This name *Panacæa* hath made some envious men stare, and such as judge this Medicament unworthy such a name, seeing it is prepared out of so vile a subject, and doth withall sometimes (when too unskilfully handled) stir up vehement Vomitings, which is not the property of a *Panacæa* to do. That I may answer such, I say, that the name *Panacæa* denoteth such a Medicament as may profitably be administred in all Diseases, the which thing the *Panacæa* of Antimony is also wont to doe as daily experience testifies. But as for its being taken out of such a vile and (by many brethren in ignorance) despised subject, that doth not at all derogate from its Name, provided that the Medicine thence drawn performs those things that are spoken of it. Pray what brought *David*, that contemptible Shepherd, unto a Kingdom? was not he of a low name, and low birth: the same is to be understood of this Medicament. It is its most noble efficacy and operation hath given it this name, and not its vile birth, nor contemptible nativity and abject form. Neither is this any lett thereunto, *viz.* that it is prepared out of a mean subject, and such a one as the ignorant contemn and despise, and which (before its preparation) was a Poison; for the Poison is now transmuted by the help of Art, and of the fire, into a wholsome Medicament, and the more strong operation thereof, such as to cause vehement Vomits, is not to be imputed to the Medicine it self, but unto the abuse of it. For so the best Wine and most fragrant Spices, are a poison to such as do abuse them. Abuse may turn the best Medicine into Poison; and Art and Fire, both can and usually are wont to

turn Poison into a Medicament. That which I have often spoken, I do here again repeat, and call God and the Truth to witness, that I never met with any subject, that might with more profit be transmuted into a wholesome Medicine, than the vile and contemptible Antimony; The which I will take care to see it prepared ready for the Poors use: And as for the Rich, to them I commend the Golden Purple-coloured *Panacæa*, which hath the same efficacy as the former has, but herein differs from it, *viz.* it operates more gently, and is less sensible in the operation, and may be far more safely administred unto Infants and old Men, and may be doubled in the Dose. Some few years since, many men of high and low degree have by the help of this Medicine been freed, not onely from the Gout, but from other grievous and inveterate Diseases: Nor have I ever heard since the time I have prepared it, for my Neighbours benefit, that the use of it wanted some good effect: Nor is there any cause to fear offending by the abuse or excess thereof, as is in the vulgar Antimonial Medicament. But this Golden Medicine will rarely stir up Vomiting in the sick, unless a due measure be by a wanton abuse exceeded, or the Dose too much enlarged. For this reason I will hereafter have by me, for such as need the same, this Golden Medicine, in the form of a Purple Powder, and the common Antimonial (because that it being like a red Powder may be easily counterfeited, and so ill-prepared Antimony may chance to be sold to the sick instead of a *Panacæa*) shall be ready made up in Pills, and in that form onely, each of which shall contain one Grain, that so being ready weighed the sick that use them may receive no detriment by weighing and so taking them. These now may be used by such men as are of a midling age, or elder;

but to those that are Infants, and aged, and weak persons I commend the Golden, as operating more gently and safely. The Antimonial *Panacæa* made up in a Pillular form, may be most exceedingly profitable in those long *East* and *West-India* Navigations, in which the Souldiers and Mariners are so extreamly troubled with the Scurvy, and debilitated thereby, and yet have so little benefit or help from the Medicaments which they carry with them. Now this Medicine is able so far to help them, as that they may make their Navigations with a more courageous and more cheerfull mind. For I have not hitherto met with any subject in the whole nature of things, that can oppose it self with greater efficacy against all the corruption of the bloud, and oppilations of the inward members, than this Medicine; the which both Souldiers and Marriners may have with them, it being not very dear, nor easily corruptible, and so make use thereof in necessitous Cases. There is not to be found in the whole World a more commodious and more wholsome Medicine, as well for the Marriners that sail for many Months in the vast Ocean, as for the Souldiers lying in Camps, that undergo troubles and discommodities of all sorts, and lead a disorderly life. And therefore if Chyrurgions that be in Ships and Camps were furnished with this Medicament, they would verily preserve the lives of many Marriners and Souldiers, and would with one onely Ounce, which is of no great price, out of which may some Hundreds of Doses be made, easily effect far more than with a whole Chest full of such Medicaments as are but of small virtue. If a Physician or Chyrurgion, that follows the Camp, had by him some Ounces, he would preserve the Lives of many Thousands of men, which would otherwise miserably perish. It is a

Medicine of easie carriage, and as easily kept, which is a thing deservedly to be accounted of, seeing it much concerneth him who is a Commander, to have at hand some present remedy for his Souldiers that are usually oppressed with the Plague, Scurvy, Dysentery, malignant Feavers, and other such like diseases, with which whole heaps of them perish, as Flies do in a cold season. This incomparable Medicine doth easily resist all those diseases. Upon this account I will have ready by me for time to come, good store of this Medicament, and such as need the same may seek it from me, and be made partakers thereof. I will perform the office of a good Christian, who being not born onely for himself, but for his Neighbours too, ought to be helpfull unto them, even as the hand helps the hand, and one member helps another, the which thing verily every one should necessarily (and well worthy is it to be) observe more carefully.

Next this Antimonial Medicine, in the form of Pills, and the Golden *Panacœa* (of a Purple Colour) follows, my *Nepenthes*, or Anodine medicament, allaying all Pains, and is made of corrected *Opium*, extract of Saffron, and the Volatile Sulphur of Vitriol. Every one knows that *Opium* is stupefactive and soporiferous, because so much mention is made of the correcting and preparing it, and the way, described by many, of so doing; For they well perceived, that it being sometimes imprudently administred, did not onely cause sleep, but brought also the brother of Sleep too, *viz.* Death, insomuch that the sick being cast into an everlasting sleep, could not be awakened any more, (for it is a praise-worthy Medicament, and such an one as will beget credit enough;) and therefore they not knowing how to take away this Poison, did bend their studies

thereabouts more and more, to correct the *Opium*, and to tame the venomous force it had. Therefore they dried it throughly, and reduced it into Powder, and dissolved it with Spirit of Wine or Vinegar, and extracted it, and by distillation abstracted these *Menstruums*, and brought the extracted *Opium* to the consistency of Honey, and thereto admixed a certain portion of the best Saffron, wherewith they endeavoured to tame and correct the venomous quality of the *Opium*. Others mixed that Powder with Oil of Anniseeds, Liquid Storax, or extract of Saffron, (which are Simples that will procure Sleep without *Opium*) and made it up in a Mass, and accounted it a most excellent confection, as being every-where hitherto in the Apothecaries Shops, and used by the Physicians with good success, sometimes in many deplorable diseases: And is even to this day (and deservedly too) in use, for there could not be found a better and more safe one. But now forasmuch as a better and safer way is found out, 'tis but just to admit of this, and omit the other which is not so good. Since the time that I knew the use of the Universal Dissolvent, or moist and cold Fire, I found out and corrected many Subjects by the help of the same. And amongst others, I dissolved *Opium* in the Liquor of Niter after my way, and prepared it, and perceived wonderfull effects therein, but especially when I adjoined to it the Volatile Sulphur of Vitriol, which is of it self an excellent and incomparable Somniferous Anodine, allaying all Pains with a wonderfull success. I also hereunto added the Essence of Saffron, a wonderfull strengthener of the Heart. *Opium* being uncorrected, is a vehement Saturnine stupefier, which doth by its immoderate stupefying property constringe as it were and choak the Vita faculties, insomuch that the often using the

same make men pale, and to sleep (for the most part) with their mouths and eyes open, and they can hardly be awakened before the operation thereof be over: And therefore many do deservedly abhor the use of the same. The adding of the Oil of Anniseed and Saffron, may in some sort restrain the cruel rage of it, but cannot throughly subdue it; But yet even this may be done with ease, when being reduced unto Powder, it be dissolved with the Volatile Spirit of Vitriol, instead of the Spirit of Wine or Vinegar, and so strained through a Paper, and precipitated with the contrary (or different nature) Liquor of Niter, and be washed with common Water, be dried and prepared into a Mass with the Essence of Saffron, in which operation the Narcotick Sulphur of the Vitriol adjoins it self to the *Opium*, and this is far better, and corrects it by its sulphureous and acid Spirit. But that the Spirit of Vitriol is most fit for this effect, I will shew the well-minded Reader. The common Vitriol doth, for the most part, consist of a Sulphureous Salt, and of an Earth containing Iron or Copper. But when it is distilled by the Fire, the Spirit of the Salt carrieth up with it a Volatile and Sulphureous Spirit out of the *Mars*; the which being precipitated with somewhat that is of a contrary nature, affords you a subtile Narcotick Sulphur, very little in quantity, but of a most wonderfull efficacy, the which I have made mention of in the Second Part of my Furnaces. But if now there be added to the Calcined Vitriol an equal weight of Iron filings or Iron cinders, such as are smitten off from the red-hot Iron on an Anvil, and half a pound of Salt-peter, and a water be distilled out of these matters thus conjoined, the Spirit of Niter will bring over a great portion of the Spirit of *Mars*. This Volatile Sulphureous Spirit is to be separated from the

Corrosive Spirit by rectification, and to be distilled into a Receiver that has in it a little fair water. This Volatile rectified Spirit, and not that corrosive one that was left behind in the rectification, is to be used for the dissolving and correcting of the *Opium*. And although that many diligent Chymists have before now understood somewhat of this Narcotick Vitriol, as I my self did, yet we have done but little as to the preparation thereof. But at length when on a certain time I had added Filings of Iron to Calcined Vitriol, to distill thence from an *Aq. Fortis*, my Retort being very red hot, did by chance break, so that the matter fell out into the fire, out of which proceeded so sulphureous a fume, and so much, and so filled all the Laboratory that I could not stay in the Room; therefore I took the live Coals out of the Furnace, as speedily as possible I could, because of the suppressions and difficulties (of breathing) which that Spirit overwhelmed me as it were withall, and hardly got my self out of the Laboratory-door, but having got a little fresh Air, I presently came to my self again, and perceived that the whole House was filled with the fume, and therefore to let it out, I opened all the windows and doors of the House. When I had thus done, presently hapned another danger, for the burning Coals that I had pulled out of the Furnace, had kindled the other Coals that were next them; There being danger of fire, and that I might prevent it (being destitute of water, and in the night-time hapning) I ran to the rest that were sleeping in the Chamber, to get them to arise and fetch water, and to help me quench the fire. But they slept so exceeding soundly, that though I called and did my best to awaken them about quenching the fire, yet was I forced to go about it my self, and do it as well as I could. Having quenched it, away go I

into the Chamber to see what they were doing of, and I found them all oppressed with a most heavy sleep, yea and the sweat dropped from all their faces, though it was Winter-season. When it was light they awoke and arose, to whom I told the danger I was in, and that I could not awaken them. They all of them confessed that they dreamed that they were oppressed with some heavy thing, so that they could not stir themselves. From this mischance, learned I two things, the first is this, *viz.* that in Vitriol and Iron lay hid an highly Narcotick Sulphur: The other was this, what the cause is that some Men but especially melancholy Men do in the Night Dream, that they are so oppressed with some thing, and yet cannot be awakned. For the Sulphureous martial and saturnine Vapours which cast the Brain and Heart into such straits, and do bind as 'twere the vital Spirits with a Cord, do cause such Dreams. This breaking therefore of my Retort, discovered to me an excellent Medicine, and the Disease subject to the same, so that there is nothing so evil out of which some good doth not sometimes spring up. I judged it worth my labour, to gratifie those that are studious in Medicine by adding to the aforegoing things, this story, hoping it will not be a thing tedious to any. Besides this is worthy of consideration, that hapned to one of the Children sleeping in the same case, whose head was much troubled with phlegminess, but the Catarrs were so dissolved and loosened by the efficacy of this fume, that it was ever after of a sound head. From hence did I conjecture that there was more to be found in the Sulphur of Vitriol than can be believed, and this did I conjoyn with the corrected *Opium*, by the often use of which Medicine, I have freed many Children from the Epilepsie or Convulsions, and found besides that it was most

exceedingly profitable for old Men, and such as were of riper years; But with this proviso, that my Antimonial *Panacæa* be first administred, to those of a midling Age, and my golden *Panacæa* to Infants and old Men, which being premised or first used, this most excellent *Nepenthes*, can by so much the better and more commodiously display its virtues. By this Medicine all internal pains, a disquiet mind, and light-headedness in Fevers, are allayed, a quiet and gentle sleep procured, the Winds and Gripes of Infants and elder Men, that afflict their Bellies and Intestines are driven away, a good ingeny and chearfull mind is procured, all wild and unquiet Spirits that molest the Heart and Brain are restrained and laid a sleep: The vital Spirit being overcome and suppressed with corrupt humours is reduced to its former liberty, and the lost strength and vigour of the Body so happily restored, that a most evident help is presently perceived, and principally if the *Opium* be well corrected by the help of the volatile Spirit of Vitriol. It may likewise be profitably corrected by the fix'd Liquor of Niter, extracted with Spirit of Wine, and be reduced into an Essence. But if this correction be made by the acid Spirit, it is better and more profitable, than that made by fixt Niter. For in correcting it by the fixt Niter, the corrected Essence is to be extracted by Spirit of Wine, which makes the powers of the *Opium* too volatile and penetrative, the which thing we seek not after in this place, being it is far better, that the *Opium* lets upon his enemy leasurely and not too strongly; and this experience sufficiently testifies the necessity of. This most excellent medicine is one of the four Cardinal Pillars, whereon the whole fabrick of medicine is built. The Antimonial *Panacæa* is a most excellent and safe purge, most fit to drive out all the evil

humours out of the whole Body. The golden *Panacæa* is the best and most excellent Diaphoretick and Sudorifick. But the corrected *Opium* and vitriolate Sulphur is the most eminent Anodine and Somniferous Medicament.

A Diuretick and Nephritick, extracted by the help of a certain proper Vegetable Spirit, and endued with excellent Virtues.

Take of Cantharides one ounce, *Aselli* or Hog-Lice two ounces, put into a Glass, and pour upon them three ounces of the Spirit of Niter, and dissolve the Vermine in a gentle heat, that they may be reduced into Water, which will be in few hours, or else leave them in a Cellar for some days and nights, and they will be dissolved as well as in the heat. Afterwards add to this Solution three ounces of Earth-worms and leave them yet for some days more in the Cellar. When they are all dissolved strain them through a fine Linnen Cloth, put in a Funnel of Glass, that the Solution may be separated from the Fæces, which if many, squeese well the Cloth with your Fingers, that the whole Solution may be separated from the Fæces, then throw away the said remaining Fæces. And to the Solution that you strained through the Funnel into the Glass, pour the Liquor of fixt Niter by little and little, and so long untill all the ebullition shall have ceased, and a thorough precipitation be made. All things thus done, separate the Liquor by pouring them off from the Vermine, and coagulate it, that it nay be again made Salt Peter, and be usefull for more occasions. Wash your precipitated Vermine well with common Water, thereby freeing them from all saltishness, and dry them in a gentle heat, that they may be reduced into a pillular form, or into an Electuary: The which medicament may be most

safely and without all danger used in the Stone, of the Bladder and Reins, being given from one, two, four, six, eight, and twelve grains at most, according to the condition of the Sick: For it brings forth the Urine and the Sandiness and Tartar; that is, as yet uncongealed, and not lumped together in the Reins and Bladder. If any one desire to have them shew their Virtues more strongly, he may then extract the dissolved, precipitated, washed, dryed, and corrected Vermine with some burning Spirit of Saxifrage, Parsly, Juniper berries, Ash, or such like Stone expelling Herbs, that so there may be yet again a separation of Fæces, and the Spirit may draw unto it self the purest Essence. This Spirit being separated by a gentle heat in a B. leaves in the bottom an Essence like a red Balsam, which is far sweeter, profitabler, and pleasanter in the forenamed Diseases, than it was before the extraction, when in the form of Powder, Pills, or Electuary. *N. B.* If a venereal Medicine be to be prepared out of the Earth-worms, then the Cantharides and *Aselli* are to be omitted, and an half part of those venereal Vermine, which are in the Summer Months in Gardens, and adhere to old Seats, and old Walls in abundance, to be added to the Worms, and to these is to be added one fourth part of a Stags Pizzle and all to be prepared after that manner we have taught and prescribed. The Worms are to be gathered at such a time as the Earth first opens it self after the cold Season, and may be dig'd out, that so you may have the Worms before they creep forth out of the Earth, and have enervated each other by their coition, for when they are thus gotten they are endued with wonderfull virtues, and are far more efficacious than they be afterwards. These Worms being dissolved, precipitated, and well washed with common Water; if they are yet once

extracted by the burning Spirit of Satyrion, Hop, or Sparagus-roots, and reduced into a sweet Essence, do become a present and effectual Medicament against impotency.

All Diuretick and principally Earth-worms being maturated and corrected, have a power to strengthen the venereal faculty. But the correcting of them must not be after the usual Kitchen way of Women, where Wine, Sugar, Spices, and such like things are added to correct any subject by. No, but it is to be done by the benefit of Fire, after a Philosophical manner, without the addition of any other things, not with the Kitchen Fire, but with that Philosophical, moist, vaporous, digesting, altering, penetrating, ripening, amending, conserving, and in one degree always abiding Fire, the which is to be sought after in Niter. Great is the errour that is committed in the decoctions of Vegetables, when Herbs, Flowers, Seeds and the like are boiled in some Liquors, as Water, Wine, Ale, and the like, and being boiled the decoction is given the Sick to drink, as if it had extracted all the virtues of the Herbs; nor is it in the mean time considered that in such decoctions, the penetrating and effectual Spirit, and sweet Oil vapoured away with the water into the Air, and yet may this be easily smelt, for the Vapour that goes out in such boilings is always endued with a sweeter Odour than the remainder left behind is, and which they use in Medicine, and this can be denied by none. Why I pray are the Waters in the Shops, where abundance of them are used, and sold, wont to be distilled now, not any more in a B. *per se*, but for the most part, in a Copper Still with common water added, to prevent burning too; of which waters it is likewise said, that they are as good as those that be distilled in a B. *per se*, without Water, and this is

agreeable to truth: For in the distillation, the most subtil moisture of the herb onely rising up, and the common Water (as being the heavier) stays behind in the bottom of the Still, and therefore they have a certain sign in the distillation of the said waters, *viz.* when the ascending water, tasts no more of the distilled herb: Then do they desist from farther operating, and cast away the remaining herb with the water in the bottom. But such whose study it is to make sweeter and more efficacious Waters, do take the water which came off in the distillation, and pour it upon more of the fresh herb, and do again distil it, and draw off the most pure part of the herb, and make their Water more efficacious, which way of preparing the Waters of Herbs, is good and profitable. Besides every one knows, that the Spirit and Oils of Vegetables, are to be distilled by a Copper Still by the apposition of a great deal of Water, as we have taught in the first part of this *Pharmacopœa*: It is therefore manifest, that the common decocting of herbs in water is of no value, and that the best part vanisheth away into the Air in boiling, and that the less sweet, and most efficacious part alone remains behind. Some skilfull Cooks know this full well, and never put in the Spices into the Pot to boil, but let the flesh be first boiled, and already set at the Table, by which they take care of losing the best Odour of the Spices by boiling them. If you go by the Ale-Brewers when they are boiling the Hop, and the Houses of the Apothecaries, you shall meet with a far sweeter fragrancy, and what doth more comfort the heart, than what remains behind, and is given men to drink? And this cannot be otherwise, by the fore alledged reasons, for the chiefest and best part go away in boiling. Therefore I do here again repeat what I said before, and do

affirm, that that Decoction which is done in the cold by the universal fiery Water, is to be preferred far before that otherway. Now it is sufficiently enough known that the greatest part of the food we eat, whether Flesh, Fish, or Pulse, are wont to be boiled in the Kitchen by the help of Water to preserve them from burning, that thereby they may be the better digested and concocted by the Stomach. And why are not medicaments prepared after the same manner? Now though in the decoction of Flesh, Fish, and Pulse, there goes off some of the vertues of the same, yet that is a matter of no great moment, for the remainder is what stuffs the Stomach from whence the body may get its nourishment. But in medicinal decoctions, no such great quantity is to be administred, but a little of them given to the Sick to drink of; and therefore they must necessarily have their vertues left in them, and not be deprived of them by decoction, and yet this Curtation of theirs cannot be shunned when the decoctions are done over the fire with common water in open Vessels. This way therefore of mine, by the fiery Water is far to be preferred before that other way. For in this decoction there can't be lost so much as the least vertues of the herb or Animal, seeing it is done in the Cold. But all abide together, in the watery or fiery Water, are ripened, bettered, and changed into medicine, and must necessarily be transmuted, whether they will or not. There is no way for the vertues to go off as is in that other decoction, where the most noble vertues vanish away in the Air. Therefore this digesting, conserving, ripening, and amending Fire and Water ought to be highly esteemed by the Physicians, wherewith they may prepare their medicaments, or at least for the preparing of some few good ones which cannot else

be gotten, as is apparent in Diureticks, which being so inverted by this Philosophical water, do not onely afterwards expel Urine, and the Stone, and all things pertaining thereunto; but do also corroborate, even as all things that have a hot subtil and penetrating Nature whether simples or compounds are wont to do: Insomuch that they do not any more cause torments and pains by a forceable expulsion of Urine and the Stone, but do gently and sweetly stir up to a casting them out, and do withal strengthen and conserve the virile Nature: But contrarily those immature and crude Simples, do by their Crudity and Wildness hurt, and not onely expel Urine, but even stir up pains. This discourse and proposed matter, concerning the watery Fire and fiery Water (by the benefit of which venomous Vegetables, Animals and Minerals may be (as I have taught) turned into wholsome medicaments) will haply create in many some disagreeable Cogitations, and may seem to them as if it were a strange thing, that I should call the Liquor of fixt Niter, and the Spirit of corrosive Niter, fiery Waters, and watery Fires, whereas there is in them no apparent visible Fire. Well, to remove this Scuple from their minds, I do in the first place judge it expedient to demonstrate that Niter is no other than a mere Fire; For put but Niter on a live Coal, and 'twill all flie up and burn away in the Air; this now is evidently seen in Gun-powder, in which the Salt-peter is together with those other added matters discharged all of it into the Air. Niter being brought by Calcination to a fixity or constancy in the Fire, or else by distillation to a corrosive Water, hath not for all this lost its fire, but hath it as yet perfectly with it self. And that this is true is hereby cleared, *viz.* that both those Liquors the fixt and the corrosive volatile one being mixt together, do deposit that

nature they got from the Fire, and do return to their form, or Saltpeter nature. Hence may it be manifestly proved that both these Liquors as well the fixt one as the acid Spirit may and ought to be called fiery Waters, seeing that they do in very deed demonstrate their fiery vertues. For they do yet retain their Fire, and do melt all things and reduce them into Water, whatsoever you put into them. This demonstration I hope is a sufficient satisfactory testimony to such as have any understanding though not so well skilled in the light of nature. But that I may yet meet with the most unskilfull of men, who are for the most part wont to measure by their most unskilfull fancy, such things as are to them wholly unknown, and that I may set it most clearly before their Eyes, that the said Waters are mere true Fires; I would perswade them that for trial of the truth they would put one little drop onely or one small piece of a Grain upon their Tongues, and see whether or no they will not in less than a moment of time find, and say that that Fire is hidden in the Water, and is just as if their Tongue had been touched with a Coal of Fire. But if they would see the very flame it self, they may coagulate or concenter either both or either Liquor, either by Antimony or *Lapis Calaminaris*, by which all Corrosives do chiefly love to be concentred, and to put off their adjoined Waters. Therefore when you have a mind to see a flame pour upon your concentrated acid Spirit, or on your fixt Liquor of Niter, the pure Spirit of Wine, and what is separated from all Phlegm: By which pouring on, the hidden Fire of the concentrated Niter, will forthwith manifest it self, and will kindle and burn up the Spirit of Wine. If he would yet farther try the truth of this thing, let him fix Niter by *Regulus Martis*, and coagulate it into a fiery Mass, and keep it in a strong

earthen Vessel well shut, that so the Air enter not therein, and that the Fire may remain so long hidden as he pleaseth. Now if he would have it grow hot, let him pour in a little water into the Vessel, which done the hidden Fire will become presently manifest, and make the Vessel so hot, that it cannot be held in ones hand: By how much the more the Water is that is poured thereupon, so much the hotter the Vessel becomes, so that by the too much effusion of water, there is danger of the Vessels breaking into Pieces. A mean therefore is to be observed in the pouring water on, if you would have your Vessel endure the longer, and give a lasting heat. This secret doth not onely teach the Miracles of Nature, but is likewise profitable for such as journey in the Winter Season, whether in a Wagon, or a Ship, day and night, in exceeding cold Weather, for by the help of such a Vessel may they heat themselves. For if they have a Vessel containing about one or two Pounds of this concentrated Fire, it will keep heat for 24 hours: And so in case of necessity such as Journey may have with them greater and more Vessels, and not be scantied of this Fire. And if in the extremity of cold they want water, they may heat the Vessel by stirring up the same Fire with their own Urine. How vile soever this secret appears, yet lies there in it a great mystery, and what is serving to true Philosophy, and in which such a fire lies hid as was buried by the Priests, mentioned in the *Maccabees*, and after some hundreds of years again digged out and found. For such a kind of Fire being fenced against the access of the Air, remains uncorrupt for 100, yea a thousand years, and this verily is a thing most worthy of diligent consideration. We have by what has been said sufficiently demonstrated that fixt Niter is a mere Fire, and that it manifests it self so to be

whensoever any one is so minded as to try. The acid Liquor doth the same, and hath a far different nature and property from the fixt Niter, the which nevertheless doth also produce to light its occult Fire according as the Artist pleaseth, and is on this wise done. Dissolve in it Iron or *Lapis Calaminaris*, and draw off the moisture by Fire, *N. B.* You shall have nothing else come over or evaporate save onely a sweet water void of all tast, and the fiery part will concenter it self in the Iron or in the *Lapis Calaminaris*, and become a fiery and dry Earth, the which being preserved against the ingress of the Air, will remain dry, nor will it ever change it self into water. This fiery Spirit thus concentrated in this Earth is so burning hot, that if it be put to the Tongue in no bigger a piece than a Hempseed, it will burn it just as if you had touched it with an hot Iron. And if you would have fire thereout of, pour in some Spirit of Wine, and you shall see the flame break out: But if you would warm your self with that heat, as we before spake of in the fixt Niter, then put in a few drops of water, which done, the hidden and concentrated Fire will become manifested (as in the fixt Niter) and continue a long while, if there be not too much water poured thereupon. If you would quench your Fire and have the Vessel cool, then shut it, and if you would have it again hot, then open it and pour on a little water. Thus therefore shalt thou have this Fire most ready for thy use whensoever thou hast a mind to employ it. So then all these things do most abundantly confirm that the acid Spirit of Niter is a cold and hidden fire, for if you put into it a little piece of Iron or *Lapis Calaminaris*, it will make the glass so hot, that you cannot hold it in your hand. We hereby learn that from this Original do the Baths arise, and is thus. When an acid mineral

Spirit joins it self in the Mountains to some Fountain of sweet Water, and doth together therewithal pass through some Mines of *Lapis Calaminaris*, or Iron, it becometh so hot that it breaks out like water heated in a Copper. Nor are Baths any where to be found save in Mountains, and in places that abound with *Lapis Calaminaris* or Veins of Iron, as may be seen in many places, but especially in that of *Aquis Granum*, where the most curious or bravest Baths of all *Europe* are found to be, and the Mountains that lie round it do abound with Iron, and *Lapis Calaminaris*. But as concerning those other profitable and gallant Secrets, that lie hidden in this concentrated Fire, 'tis not expedient to speak of them here. We have revealed to you enough already, and he that learns nothing hencefrom, shall have nothing, nor is it given him of God to know the unsearchable properties of this Fire, and to open the Gate of true Philosophy and Hermetical Medicine. Here then the Son of Art sees what a concentrated Fire is able to effect, and how its many vertues are as yet impeded by reason of the Earth, (consisting of the Iron *Calaminaris*, and Antimony) wherein it is included and hindered from answering the event that may be hoped for from it. For an impure body is able even to make a pure Soul inhabiting in it, ignoble and impure, yea and plainly to kill it; and this may be understood as well of Men as Minerals. Now it may be easily conjectured what such a pure Soul, and which is separated from all Fæces is able to do. Things incredible and almost Divine may be effected by such a Fire. The Fire of common Wood and Coals, if concentred will perform things wonderfull. But I pray what then will the concentred Fire of the Sun do, which is a thousand times purer than that. Next after God, is the Sun, next the Sun the Fire of Coals and Wood, is of all

things in the whole World, the most noble. Were it lawfull openly for me to declare my opinion of the Fire for the rude and unskilfull to understand, I should enlighten many a dark Corner. For the Elementary Sun, which bestows upon the whole World all Light, and all Life, is nothing else but the Garment and Covering as it were of the omnipotent God. If then the Garment and Covering be so noble, so efficacious, and so potent, in its Essence, how great then is and ever will be the Majesty of God, that Eternal Light and Center of all Lights? We cannot so much as look upon that Garment, *viz.* the Sun without hurting our sight, nor search out its wonderfull virtues and properties by all our speculations, and as I may say, Philosophations. Why then are Men so foolish to speak, and think so lightly of God, and yet know nothing of him? Hence is it that almost every one feigns to himself a peculiar God, and worshippeth and adoreth him, which horrid impiety, the true and onely God abominates. The Ancient Physicians attributed the round fiery Sphere that hath its rise from God, unto the Sun, and figured it out by the sign of perfection, *viz.* a Circle with a prick in the middle, whereby the Center is deciphered. But seeing that in all things, the Center is far more noble and excellent than the circumference it self, which hath its birth from the Center, but the circumference it self doth by so much the more differ from the Center, and is more unequal to it, by how much the farther off it is from it: And contrariwise, is to be judged so much the equaller to it, by how much the nearer it approacheth thereunto: What then shall the prick in the Sun be, seeing that the Sun it self being but as the circumference to that point, be such a most noble and excellent Essence? What name shall we call that point by? To whom is

it lawfull thus to do, (*viz.* to describe that name) in this perverse World? I even constrained, though against my will, to forbear farther discoursing thereabouts, and to refer it to my Treatise of the concentrating of the Heaven and the Earth. But thus much I say, that our Terrestrial Fire which we daily make use of, is the first degree of that Ladder whereby we ascend to God, so as to comprehend (or lay hold on) this omnipotency, to perceive and search into it, to Love, Fear, Worship, and at last to see and be rendred (through Divine Grace) partaker of the Divine Majesty: Seeing then that the common Fire and which every body knows is as I will yet again say, the first degree in that Scale or Ladder, whereby we may ascend to God and his Mysteries, and yet the property thereof is so much unknown unto us: What I pray shall we think then of the second and third degree, the which we know nothing of, though we think our selves to know so much. I do therefore affirm here, and that boldly, that our knowledge is as nothing, and there is not one amongst many thousands that knows the second, (much less the third) degree. But haply hereafter I shall speak and demonstrate more things of this nature.

A Cordial and Comfortative to be used in great and continual Diseases.

Take the Flowers of Marjoram, Sage, Rosemary, Mace, two ounces, Nutmegs, Cardamoms, Zedoary, Galangall, one ounce, chosen Cinamon eight ounces, extract the Tinctture with Spirit of Wine, then dissolve in rectified Spirit of Salt, and which is acuated by an addition of Niter, one ounce of Gold: Pour this Solution to the Spirit of Wine, which is impregnated with the Tincture of the said simples,

and put them to distill in a Glass Retort in a dry B. There will first come over the Aromatical Spirit of Wine, not onely sweet but withall clear, which when it begins to come white and troubled, take off the Glass that you received your Spirit in, and put on another, and draw off all the moisture in a gentle heat, till there comes out no more Spirit of Wine, and an acid Water of an unpleasant Tast follows. Then take out all the Fire from under your Retort, that it may cool. In which (when all is cool) and the Solution taken forth, you shall find the Oil of the Spices swimming on the top, which is as red as blood and is impregnated with the Tincture of the Gold: The which being separated by a separating Glass from the Spirit of the Salt, you must add to the Aromatised Wine that came first over, which will presently imbibe the said Oil, and be tinged with a most curious red. As for the remaining Gold, which the Oil of the Spices hath not attracted to it self, you may precipitate into a tender and bright Calx, and wash it well with water and add it to the Aromatised Spirit, and Oil with a sufficient quantity of Sugar Candy, that the Spirit may be rendred sweet and pleasant. So shall you have a most efficacious *Aqua Vitæ*, the which doth wonderfully corroborate and refresh the Sick, in all kinds of weaknesses. But this precipitation is not to be made like as the common is, in which the Powders that are precipitated do lose their Metalline form as Gold, which being changed into a yellow Powder is called fulminating Gold, and being put upon a Plate, and heated, gives a noise like a Gun, the sound it gives is very loud, and the blow strikes downwards, so that the bigness of a small Pea being kindled in a silver Spoon will make a little hole. But you are to precipitate the Gold on such wise as that it may retain a Metalline form, but so

tender and fine that it may be well brooked even in the Eyes. Neither must all the Gold be precipitated, but onely the most noble part, and as it were its Soul, which as to its colour is much fairer and sublimer than common Gold is. But the more vile part is to be separated by a peculiar precipitation, and to be reduced by fusion. To this pale part is its former colour to be restored by Antimony, so that no loss may be made. If then the former part being precipitated, is better than pure common Gold, the latter part must necessarily be (being reduced by fusion) more vile, or thus, if the latter be baser than common pure Gold, the former shall be better than it is, and will therefore be more profitable in Medicine, forasmuch as it will (being digested and consumed in the Stomach) display its virtues, which the common filed Gold, or yet the Leafe Gold will not do. I purposely tried this matter, and found the things I tell you of, to be true. But if so be as any doubt as yet of this thing, concerning the first precipitated Gold as being the best part thereof, and which we bid you to add to the Aromatized Spirit, he may melt it down with some *Borax*, and compare it with the latter precipitated Gold, and then he will easily perceive the wide difference that is betwixt them. The first will as to its Colour, far exceed the Gold of the best Duckats or Rose Noble, but the latter will be far worse. That first being again dissolved and precipitated after a Philosophical manner, that half of it may again settle down, it will become more noble, and again leave behind it a particle of pale Gold. Which operation is verily most worthy admiration, by the help whereof, Gold certainly may be at length haply so concentrated, as to be able (when reduced to the highest nobility, colour, efficacy and vertue) to give colour to the other

metals, and amend them. But this is not what I have hitherto, for want of time, tried: But I hope (God permitting me) shortly to shew such a Gold to the studious of Art, seeking after it merely for this cause, that I might thereof make an excellent medicine. I will treat more plainly and more fully in my fourth part of the Prosperity of *Germany*, concerning the Artificial and Philosophical Concentration of Gold and Silver into good Medicaments; but that I may here give the Lovers of Art some small Testimony how such a precipitation may be effected, take with you these few things. The precipitation may be done as well in the dry as moist way, but there the moist way is used, which is requisite in the making of this Medicine, but yet it is troublesome and hazardous, because that sometimes the glasses break, and the Gold falls amongst the Ashes. But the dry way and which is void of any danger, belongs not to this place but to the fourth part of the Prosperity of my Countrey. I mention it for this end onely, that it may be seen and considered, that it is possible to make some Separation in Gold as well as in the meaner metals. For he that knows how by the benefit of Art to make a Separation in some metals of the best part from the worst, hath a profitable amendment of the metal. We teach in the second part of the Prosperity of *Germany*, how the volatile and unripe Minerals, may by Niter be reduced into malleable Metals. In the third part we shew the way of turning the common and imperfect Metals into perfect Gold and Silver. Then at last in the fourth part we shew by what means Gold and Silver may be advanced into more than perfect Bodies and appertaining to medicine; concerning which Separation more shall be spoken in what next follows. Nor hath any one reason to make any Scruple and imagine that I

contradict my self, seeing that in the aforesaid medicament I make use of precipitation and tender Gold, and yet have openly in many places spoken the contrary, *viz.* that corporeal Gold cannot be concocted and digested in the Stomach, and this I have most often tried. For the Gold which we teach the precipitation of here is much better and more noble than the common Gold, and upon that accompt is not to be accompted of as corporeal, but for the very Kernel, and Soul thereof as it were, which being digested in the Stomach of a man, doth produce its vertues into open light. *N. B.* That the said golden *Aq. Vitæ* being to be used, you must first shake the glass a little wherein it is kept, that so the most subtil Attomes of the Gold may commix themselves with the *Aq. Vitæ*; then afterwards some few drops of the same according as the Person and Disease is, are to be administred in some convenient Vehicle. If you make trial with one or two small drops, you shall experience its wonderfull heart strengthening Vertues, and its most profitable use in all weaknesses.

Another Metallick Medicament prepared by the help of Nitre, out of a Vein of Lead containing Silver, and most profitable in all the Sicknesses or Distempers of the Brain.

Take a Vein of Lead that is rich in Silver, nor hath either Copper or Iron mixed with it, but by how much the richer it is with Silver, so much the better and more beneficial is it for this work. Separate from this Vein all the Sulphureity or Brimstony stinch by Niter, according to the Spagyrical Art, that so the most pure, most subtile, and most highly Volatile and fluid Mercurial part may remain. Wash off the Niter as carefully as you can, and separate it, that a

bright snow coloured heavy Powder may remain. This most exceeding fluid and Volatile Powder is the *Mercury* of *Saturn*, 1, 2, 3, 4, 5, even to 12 grains thereof, being administred in convenient Vehicles, doth exceeding quickly yield help in all grievous affects of the Brain, in the Plague, Pains of Children that are troubled with Worms; it quencheth all internal heat, and withholds the gross Vapours from ascending up into the Brain, it opens all the obstructions of the Liver, exhilerates the melancholy, restores the Lunatick, foolish and phantastick Ingeny, especially if their Bodies be first prepared by my Antimonial *Panacæa*. Nay more, this Cephalick medicament will operate yet better, if after the first preparation by Niter it be again washed, and made more subtil, yea and plainly fixed, that so it may exercise its vertues and power with the greater efficacy. Last of all, it is yet rendered most efficacious, if this *Mercury* of *Saturn* be in the last Operation driven over in a Retort and so converted into a sweet Milk, demonstrating the truth of that Philosophical saying, *The Fire and Azoth do wash the Laton*. Niter is the true Azoth of the Philosophers, and besides it, is no other to be found: It is the Scope of the wise men, the universal Bath of Metals; The said sweet Milk may be coagulated, and fixed into a transparent and fluid Stone, which again coagulateth and fixeth common purged Mercury. But I have not as yet so brought it to such pass as to undergo *Saturn*'s trial in the Cupel as they call it; yet am I doing it, and hope to bring it to pass. But although the Stone is yet volatile, yet doth it penetrate the imperfect Metals as *Mars* and *Venus*, and makes them easily fluxible and volatile; but seeing it does so now, what would it do were it reduced to a fixity, this any one may easily conjecture what effects it would

have. Haply this work is not much different from the work of the little Countreyman. But seeing that purification is not different from this matter, we think it worth while briefly to teach, what it is, and in what it consisteth: But principally because all my writings tend to this end, *viz.* the separating of the pure from the impure, from which ground have we given this Book its name. Few are they that know the way and manner of Separations, and therefore we deem'd it highly necessary to speak somewhat thereof in this place. For all the Philosophers do cry out with one voice, make the fixt volatile, and the volatile fixt. An hard and fixt thing doth by laying down its Earth become fluid and volatile, and this is a Philosophical separation and operation; after it comes sublimation and distillation, by which a thing is yet again made more pure, being separated from its gross Fæces. For by how much the oftner any thing is distilled or sublimed, so much the purer doth it become, and by how much the purer it is, so much the more efficacious and penetrative it is found to be. Now again if the most pure part of that thing be brought to such a pass as that it will resist the most violent and all things consuming forces of the Fire, every one will easily conjecture what may be obtained by such like operations as these. These things we have spoken do shew the metallick purification, effected by the benefit of the Spagyrical Art. The ablution of Vegetables, Animals, and Minerals is threefold; The first washing carries off by the help of Water the adhering impurities, as Sand, Powder, and Earth. The second separates the thin and watery parts from the earthy ones, by distillation, and doth the same thing as sublimation is known to do in the separation of Metals. The third separation is performed by the Fire, *viz.* when the

subject that is to be purified is made red hot in the Fire, that so the combustible Sulphur being inflamed may be consumed, the Mercury may go away in fume, and the fixt Earth onely with the Salt stay behind, the which is to be understood of Vegetables and Animals. The case stands otherwise with the Metals, whose three principles are so knit by nature with so straight and radical a tie, into such an homogenial matter and so hard, that they very hardly admit of separation, but do either very slowly and by little and little ascend together by Cohobation, or else abide constantly together in the bottom. And albeit that some black Metal, be either by sublimation elevated into Flores, or by calcination reduced into white Ashes, yet after reduction the Metal is found to be as before of the same form, and endued with the same properties, which it had before calcination, so that these operations do no ways deserve the name of Philosophical Purgations. How many have deceived themselves, by thinking if they turned *Mars* into a red *Crocus* they should therewithal make *Lune* fixt, not considering that that *Crocus* returns by reduction to its own former nature and Iron shape. Common *Mercury* is precipitated into a most fair and most red Powder, and returneth by reduction to its first running nature. *Saturn* being calcined by common Salt becomes red Powder, or a *Minium*, which being reduced is the same Black-lead as it was before. Hereupon may such an one be deservedly said to wash the Black-moor that bestows his labour on this work. The same *Saturn* being washed with Vinegar or any other corrosive liquor, gives indeed a white Ceruse, but it is but a borrowed colour, and he covers his black body over with a white Robe, but yet for all that is presently disrobed of the same by *Vulcan*: The true Philosophers do

nothing esteem of this sophistical Purification. *Saturn* is by all the Philosophers accounted for a black and leprous Gold, for they openly say, that there is in *Saturn* what the Philosophers seek: Read but *Paracelsus* his Book of the vexation of the Alchymists, and there he mentions more. Nor is it without cause that that old Symbol or Proverb is used amongst the Chymists. *The Fire and* Azoth *do wash* Laton. *Azoth* is Niter, and *Laton* signifies the matter of the Stone. Some do ascribe *Laton* to *Saturn*, I will forbear, onely thus much is to be observed, that the word *Laton* signifies the matter of the Stone, which is to be washed by *Azoth* or the *Acetum* of the Philosophers that is Niter. Verily I well know that besides the common *Saturn* and Antimony, there is another, more easily washed by Niter; but because we here treat of the Vulgar, or the first Ens of *Lune*, and the reducing it into a good Medicament by Niter, we will acquisce in what is already spoken, & put off the explication of the said matter to another place.

A Uterine approved Medicament.

Forasmuch as I have hitherto taught the preparation of some notably efficacious Medicines by the help of Niter, and yet have not in the mean while made any mention of the Sicknesses familiar to the Feminine Sex. I judged it wholly necessary to help this weak and infirm Sex (which is appointed for the propagation of mankind) with some singular Medicament: For (besides those Diseases whereto the Women are subject as well as the Male Sex) they are yet afflicted with many Sicknesses that do arise out of the Matrix, wherewith all as well Maids as married Women, and these last also are troubled not onely before Child-bearing, but afterwards, *viz.* when the Matrix is not well purged after Child-birth, and so

begets various Sicknesses, Pains, Winds, Inflammations, Suffocations, the ascending of evil Vapours unto the Heart, or else by obstruction of the Menstrues, do cause a swelling Belly, Weakness, Debilitation of the Strength, a straightning of the Heart and Brain, most vehement Griefs, and lastly Death it self: Or else the Matrix may be moved out of its place, in Child-birth, its Bonds broken, and the Matrix it self so much repleated and debilitated with overmuch moisture, that it has not so much power as to be put and retained firm in its due place, but some are constrained to leave it hanging out, to their great detriment, and are extreamly tormented with this so great a detriment, the Matrix presently slips down out of the Body by either vehemently walking, or any other violent motions, and are necessitated always to carry about them a pessary framed to the intent of keeping the said Matrix up in their bodies, and that to their exceeding great trouble. Now then for the meeting with, and resisting these aforenamed and other such like discommodites, but especially such as are overwhelmed (as it were) with them, I will set down the way and manner of so doing. As concerning the Matrix and its Diseases which do arise after Childbirth, if so be that the Matrix be not rightly cleansed, even the Women themselves know their own Remedies, and do for that reason plant those Herbs that are usefull thereunto in their own Gardens, or gather them in a fit season and so keep them by them, till they have need to use them in expelling the remains and trash left after Childbirth: Such as these are *Pulegium*, or Penny-royal, Mother-wort, Mug-wort, Savin, and the like Herbs, which have a powerfull expulsive virtue, and there are waters too in the Apothecaries Shops distilled to this intent, concerning which it is needless to write any

more in this place: Thus much onely we would advise, that such Herbs and Species as are used for such effects, are to be rendred first more subtile by separating the pure from the impure, that they may afterwards operate more speedily and better. The which thing may be most commodiously done on such wise and manner as I have taught and prescribed in the first Part of this *Spagyrical Pharmacopœa* concerning the Essences of Herbs. But the obstructions of the Matrix, and stoppage of the *Menstrues* are not so easily unlocked by bare Medicaments thus barely taken in, for they penetrate not so far with their Vertues, but rather, as experience teacheth, is effected by such Medicaments as are applied beneath, and that more easily, and which we have already mentioned in the Second Part of the Furnaces in the Ch of Spirit of Urine, where I have manifested a peculiar instrument by which such necessary Medicaments may be intromitted into the Matrix. I have therewithall hitherto performed many happy Cures. Bur forasmuch as I have since that time found out a far fitter instrument for such diseases, I will clearly describe it for the sake, comfort, and help, of such Women as are obedient to their Husbands, and chastly observe the bands of Wedlock, *viz.* both how to prepare and how to apply the same. You are to get an Instrument made of good Silver (not of Copper) its figure to be round, and like a small Cane, and shut in the fore part, and to be a little longer than a man's finger, and about that bigness; You are likewise to get another a little smaller so as to go into the other, which other or bigger one must have three little edges on its inside all the length of it, thereby to keep the smaller instrument about the back of a knifes breadth from each side of the bigger one, that so it may not touch

it. In the hinder part let be a Cover made which may shut the Instrument tight when the Medicine is put in, lest the spiritual vertue of the same fly back out of the body, and so order it that it may perform its operation on the Matrix through the Instrument, which is to be perforated (towards the top) with holes. To the hinder part of this Instrument let a Thread be tied whereby it may be plucked out when its operation is over: Therefore like as the disease is, so shall a suitable Medicament (and what is made exceeding Spiritual) be applied: On this wise let a small piece of fine Sponge be embibed therewithall, and let the inner small Pipe be filled therewith, and be so put up to the Matrix. If the *Menstrues* be obstructed, then the most approved remedy is the concentrated Spirit of Urine, which by its subtile, penetrating, warming, mollifying, and opening vertue opens the little Veins of the Matrix, and gives an Exit to the obstructed *Menstrue*. But if the Matrix labour not with this disease, but is onely besieged as it were with cold and tenacious humours, then the hot and penetrating Oil of Tiles or Wax, rectified most subtilly, is to be applied, which being smeared on some Sponge, is to be conveyed in by the Instrument into the cold and watry Matrix, the which will thereby be warmed, dried, and freed from the greatness of its moisture. But if so be the Matrix shall be moved out of its place, or its cords broken, or too much relaxed, or any other way affected, and so not be capable of retaining the Matrix, and keeping it from sliding forth out of the body; Then must astringent things be used, which may constringe the too much loosened bands, and may heal and tie the Matrix again in its due place, and strengthen it. Such as these are the distilled Oils out of mens hair, out of the Wool of Sheep, and such-like Animals, out of the

Horns of Goats, Claws of wild Beasts, and Feathers of wild and ravenous Birds, and such-like things, which being laid upon the Coals, do draw themselves up together, and do by that contraction shew to us as it were their use. But the manner of distilling and rectifying these Oils we have already taught in the Second Part of our Furnaces, so that it is plainly needless to repeat the same in this place. I say, and that truely, that if so be that these three kinds of Medicaments be rightly applied in those three affects of the Matrix, that they will perform things even wonderfull, and many pious Mothers might be preserved sound, a longer time amongst their poor Children, were they but help'd by such remedies. For it cannot be that much help should be brought to the sick and hurt Matrix by the Potions that are drunk of, or the hysterical watry Medicines that are injected by a Syringe. For such Medicaments as are taken in at the mouth cannot penetrate with their Vertues home to the Matrix, so as to help it, to open, to purge, and to heal it, or to heal the dissolved and relaxed bands. And as for Waters and Decoctions that are applied beneath, and there injected, they presently slide out again, and do help the Matrix but little, or nothing at all. But now these Oils of mine and Spirits are commodiously applied by means of the Instrument, and discharge their office most efficaciously. But there is yet one thing necessary here to advise you of, *viz.* that such as desire to use the Spirit of Urine, Oil of Tiles, or Wax, or Oils out of Horns, Hairs, or Feathers, for curing of the said defects of the Matrix, do prepare them themselves, or commit them to such to prepare them, as are skilled in the Art of distillation, and versed in rectifying such Spirits and Oils, thereby exalting them to the highest subtilty. For if so be that any would buy in some Apothecaries

shop, those things that he knows not how they are prepared, and haply such as are corrupted already, and not fit for use, will be grosly mistaken. For it is not sufficient (if a thing is to be made use of) that it hath a bare name onely, and be destitute of the Vertues themselves, and which are no ways effectual) for the said Sicknesses of the Matrix are here taught to be cured not with corporeal, but with spiritual and efficacious Medicaments. It is therefore necessarily requisite, that the Medicines we have spoken of, *viz.* those Oils and Spirits, be excellently well prepared, and so as to exercise their Vertues by emitting or ejecting their invisible odour and vigour onely. The Spirit of Urine is to be so volatile and very subtile, as that it will vanish away out of an opened glass, and therefore there needs a greater diligence in preserving and keeping it; It is to be well preserved in glasses close stopt, for if the Spirit vanisheth away, there remains onely an unprofitable Water void of all kind of Vertues. I have therefore taught the making of peculiar Glasses, which will not let go the Spirits, the shape of them are described in the Second Part of my Chymical Furnaces, in that place where I treat of the Spirit of Urine. In like manner the said Oils are to be well rectified, and to be made exceedingly volatile, so that being exposed some few hours to the warm Air, they will vanish away; which if they will not doe, neither will they effect ought. I must needs confess that all the time in which I have lived, I never found a good Spirit of Urine, nor well rectified Oil of Wax or Tiles. I will say nothing of the Spirits of Hairs, Horns, Feathers or Quills (for there's no use of them.) I have indeed found amongst many, a bare worthless, saltish Phlegm, but the very true Spirit of Urine it self I have not met withall. The Oils of Tiles and Wax are indeed found in all

Apothecaries shops, but are for the most part corrupted by their long lying, and are old, thickish, red, tenacious, and deprived of their due odour, are stinking, and spoiled of all their vertues. For 'tis very rare that such Oils are rectified, but are sold, such as they be, when they come first out of the Retort, with a saltish kind of Acrimony adjoined unto them, which in the rectification abides in the bottom, and is at last separated from the Oil. Such Oils are of no value, and appertain not to this curing, for they will do just nothing; and thus much I could not omit advising you of. For haply when some sick person or other readeth here in this my book, that such Oils do most highly conduce to expell the said defaults of the Matrix, and yet perceive no comfort or help by the use of them, without doubt the fault will be laid on me, as that I had written a lie, and not upon the ill prepared Oils. This therefore do I affirm, that except your Oils be good, you will never have from them the hoped for event. And how (indeed) shall the sick man know if the Oils be good or not. The Merchant or Seller of them won't confess them to be old, ill prepared, and deprived of their odour. So oft times the fault is laid upon the Authour, and he's condemned for writing unprofitable things, and which are not agreeable to the truth. But the fault verily can light on none save upon the Magistrates, who (by winking at such things) do permit it. And when any one goes to be furnished with these things which are requisite, in some Apothecaries shop, and the Apothecary haply sells but few Wares, and all the rest wax old as they lie, and are corrupted; and if haply sometimes one or two such and such Simples or Medicaments be sought for but once or twice, it may be, in a whole year, he delivers the things he has by him, which if helpless as to the sick buyer, yet

are helpfull to the Apothecaries purse. But yet this is an unjust thing, and a thing contrary to the love that is due unto our Neighbour, and what will burthen the Conscience. The sick man thirsting for help, puts the hope of his help and comfort in the Medicine exhibited him, which if not good the disease prevailing, the sick man dyes, but had good and profitable Medicaments been used, instead of the unprofitable and evil ones, he might have recovered. He therefore that is guilty of such evils, let him look to it, what account he will at last give unto God for his transgression; That which I have aforesaid, doe I again repeat, and do yet firmly alledge, that the beforementioned Spirit of Urine, as likewise the Oils of Tiles and Wax, and these other Oils of Horns, Hairs, and Feathers, and their most efficacious Spirits may be made use of in the expulsion of the affects of the Matrix of what kind soever, both in the younger Maids or Women, and in those that are of riper years, and that with most high admiration. It is therefore a just and right thing that they should be found in all the Apothecaries shops, and that they should all of them be prepared after a due manner. For they are not onely good in those diseases that afflict the Womb, but do likewise operate miraculously and doe things incredible in many other diseases and affects of the Body if well and rightly prepared and duely administred inwardly and outwardly; Concerning which we have written more at large in the Second Part of the Furnaces, *viz.* how they are to be prepared and made use of. Any one that is endued with understanding will perceive easily that a living Spirit is far more efficacious than a dead Body and exanimated Carkass. Forasmuch therefore as you have here heard that such grievous and incurable (so accounted at least by almost all

Men) diseases of the Matrix, by which so many Women are swept away without any help, are to be cured by the alone application of subtile Spirits, and so few know the preparation of them, I will teach for the sake of that weaker Sex a better and more effectual Medicine, and withall will prove it by an example, that all subtile Spagyrical Spirits may be concentrated and augmented in their Vertues by the help of Art, and that one Spirit hath the power of concentrating another. And because this Treatise, and all the Medicaments therein proposed, aim onely at this end, to shew the wonderfull Vertues of Niter; And it hath been besides shown, how all the said Medicaments ought, by the help thereof, to be prepared; the same shall likewise be done in the demonstration of this Medicine.

I taught in the Second Part of my Furnaces to prepare a Spirit of Urine and *Sal Armoniack* by the addition of Calcined Tartar; But yet the already concentrated Urine or *Sal Armoniack* may be mixed with double the quantity as its own weight is, of fixed Niter, and so be distilled, for so those Spirits will be more strong and more efficacious than if Tartar were added unto them. And if the Oil of Tiles or of Wax, which is made by the addition of Earth, so heated as to imbibe the Oil or Wax, be yet once more distilled by the concentrated Spirit of Niter, it will be brought to the highest subtilty, and ’tis to be done after this following manner.

Dissolve in one pound of the Spirit of Niter, four ounces of *Lapis Calaminaris*: Put the Solution in a Glass-Viol upon a vaporous or dry B, that the Phlegm may evaporate by little and little (for the *Lapis Calaminaris* holds all the Spirits, and permits the Phlegm to go off) and the Spirit of Niter will remain

behind in the Viol like Oil. Take one part of this concentrated Spirit of Niter, and half a part of Oil of Tiles or Wax, put them both in a glass Retort well luted, and force them out (by a distillation in Sand) from the concentrated Spirit into a great Receiver; and by this operation it will be far more penetrative than it was before. For the Spirit of Niter being by concentration by the *Calaminaris* freed from all its Phlegm, and seeing it is thereby become the more attractive, and can find nothing else that it might attract, it associates to its self all the humidity that lies hidden in the Oil, and which could not be separated by the former distillation, and hereby brings to pass that the Oil doth necessarily become more subtile and efficacious, yea so penetrative, as that it performeth wonderfull things, especially in the effects of the Matrix, the which nought but very subtile Spirits can heal, and which those concentrated Spirits are wont to do far more certainly and securely than all the other Medicaments in the whole world: After the same manner is the concentration and purification of the other Oils to be performed. And now that none might scruple as to Waters being mixed with the said Oil or Wax, which have no affinity with Water, the separation of which from the Oils, I have here taught; I would have such an one to know, that much fatness, as the expressed Oils of Vegetables are never without an aqueous moisture, though it be invisible, and cannot be perceived, for the fire can make it manifest by distillation: As for instance; There's Oil olive, one pound of which is wont to yield six or seven Lots of Acid Water by distillation; and thus do all Oils, Wax, Turpentine, Rosin, Gums, Pitch, Amber, and all combustible fatnesses. Yea even the very burning Spirit of Wine it self, and such others as

are prepared of Vegetables, can never be thoroughly rid of their Phlegm, unless they be poured on some Calcined Salt, and so rectified, they leave their humidity therein, and become more subtile. But this is to be noted, that by how much the drier and more attractive that Salt shall be, so much the readier will it attract the moisture out of the winy Spirit and hold it. Therefore the Salts of Vegetables, Calcined Tartar, and principally fixed Niter, serve for such a rectification. The other Corrosive Salts, as fixt *Sal Armoniack*, Calcined Vitriol, and such like, do rather love to hold and retain the Phlegm of their own peculiar Volatile Spirit than of the Spirit of Wine. And thus much let suffice as to making subtile Oils more subtile, that they may perform wonderfull things in Medicine. And now having described in this my Second Part of the *Spagyrical Pharmacopœa*, some of the most necessary Medicaments, that are preparable by Niter, and have shewed the way of using them, and which may safely be given in chief diseases as well for preservation as cure: I could to these add many more, and so encrease the number of them. But because there are not a few of such good kind of Medicaments in the writing I have hitherto published, *viz.* in the first, second, third, fourth, and fifth Part of the Furnaces, in the *Miraculum Mundi*, and in the Mineral-Book, and there shall yet follow more in the following third Part in this *Pharmacopœa Spagyrica*, in the Vegetable work, as also in the second, third, and fourth Parts of the Prosperity of my Country, I judged it needless any longer to dwell on these here, but will onely by way of conclusion, and for (as it were) ornaments sake, yet add one onely Medicament of Niter, which will be none of the meanest. But forasmuch as this is not a common preparation, but comprehends in it great Mysteries, it

seems not good unto me to set down its preparation before the eyes of the perverse world. Let it therefore suffice to give onely some hint, that the Common Niter, which to our Eyes appears most white, doth contain in it a Soul of a deep red Colour, which by the benefit of the Vulcanick Art may be thence educed. For when *Vulcan* hath reduced that old Dragon, bound in Chains, unto a most high streight by his Iron and fiery Mallet, and yet cannot plainly kill him; *Neptune* coming in to help, meets the Basilisk with a clear Looking-glass, and turns on him his own peculiar poison, and so slays him. As soon as he begins to die, and ceaseth to vomit forth fire, *Neptune* laying aside all fear, approacheth boldly near him, and puts a Sheeps-skin over his Jaws, and receives his Bloud and Soul, and precipitates it into the Salt-sea, wherein being drowned and choaked, he lays off all his venome and all his filth, and is converted into a most fair and most red Medicine. One onely drop of this Soul of Niter can tinge an ordinary glass full of Common water with a golden Colour. But he that can turn this Bloud of the Dragon by the help of fire into a fire-resisting Salamander, he may deservedly be compared with the happy *Jason*, and obtain most great Honours, Treasures, and Riches. From all these things may a studious Artist easily see what Mysteries lie hid in Niter. The things which I have hitherto described are onely as it were small sparklings of those kinds of Mysteries that lie hidden in Niter. There shall be described in the fourth Part of the Prosperity of my Country, and in the following third Treatise of this *Spagyrical Pharmacopœa* more and eminenter Metallick Medicines, and which are preparable by Niter: and this is done to the intent, that every one may know, how wonderfull and excellent a subject Niter is, the

which is notably hidden by the Antients, and never wont to be called by its true name, but by Enigmatical Riddles. From hence has sprung up even infinite names, as, a dry water, a water not wetting the hands, an Hermaphroditical *Mercury*, a *Balneum Regium*, the Soap of the Wise men, the flying Dragon, the Urine of Boys, a Dunghill, Azoth, the washer of Laton, a most sharp Vinegar, the Stygian-water, the Death of the Living, the Life of the Dead, the Purgatory of the imperfect Bodies, the Basilisk, the forked Serpent, the most great Venome, the Venome of Herbs, the *Menstrue* of Women, and such like infinite names, whereby they have wrapped over its true hidden name in Cimmerian darknesses, but is now by me revealed, and is set before the eyes of the whole world, and it shall farther be revealed and detected in the three remaining Treatises of the Prosperity of *Germany*, which shall very shortly follow, and so its wonderfull power and most efficacious vertues, which it performeth in the bettering of Metals, and in preparing Metalline Medicaments may be manifested and laid open before the whole world. I will not onely declare this in writing, but also will (God permitting) very shortly shew, even manually and in very deed in a convenient Laboratory, the making and use of all my Furnaces, hitherto published in my writings, and the preparation of many excellent Medicines, as also the truth of the metalick Transmutation. Nor will I do thus to the end that I may advance my own profit, but will rather do it for this intent, *viz.* that the health and safety of many thousands may be provided for that are afflicted with various sicknesses, and that the whole World may see, believe and confess, that the Transmutation of Metals by the abject Niter may be effected. But because in

such a like demonstration, if the Laboratory be frequented but for one years space onely, and daily laboured in, and the confecting of so many Medicaments be shown, such a great quantity of various Medicaments as I shall have by me, cannot be all used by my self, nor can they be of any use if laid up, and therefore they shall be sold to any one for a small and vile price, that so they may each that needs them use them in their necessity. It is not Covetousness that driveth us thus to doe, thinking thereby to get great riches, but onely to get just as much as may serve to pay for all the necessary matters, as Coals, Glasses, and other things. So then by this so good and laudable a work, there will not onely be laid open to the whole world, the occult Mysteries of Nature, to the honour of God: But withall, the most miserable poor Sick will easily obtain good Medicaments, and recover their former health. Nay farther, not a few of such as have been in want will be able by the most profitable use of Niter in transmuting the inferiour Metals into better, be able to sustain themselves better and more quietly. But that the whole world may see and consider that my own peculiar profit and gain is not sought, but that my Neighbours profit is out of a Christian affection onely aimed at, there shall be adjoined at the end of the following third Part, the price of every Medicament; from whence every one may easily conjecture, that there is not expected any gain or large profit, but onely the recovering of my disbursements; seeing no one is to be found who, bestowing great costs in teaching others, would willingly lose both his Expences and Labour too. I will with a willing mind reach others, but I will not lay out my Money and run the hazard. The World is wise enough, and great is the number of those sick

people that need help: And therefore this publick Laboratory will (by God's help) be able to bring abundance of profit to all mankind; In this Laboratory there shall be all the Furnaces and all the Instruments whereof I have made mention in the Writings by me published, but the resemblances of them not pictured, because there's no occasion for that to be added; And withall, those Furnaces, Presses, and Instruments which we have mentioned or shall mention in the first, second, third, and fourth Part of the Prosperity of my Country, and in the Vegetable work, and my other Writings shall be there to be seen, the which certainly will be exceedingly helpfull to most men that abhor not to labour, to procure them food and sustenance in their necessity.

Furthermore, forasmuch as all my Writings hitherto published, are very negligently and faultily printed here and there by other men, against my knowledge. I will again send them forth corrected, amended, adorned, and encreased with the figures hitherto omitted. And this I was unwilling to conceal from the Lovers and Students of Arts. Herewithall will I conclude this Second Part of my *Spagyrical Dispensatory*, and shortly add the Third Part, onely wishing that this Work of mine may serve for the comfort and assistance of very many sick persons. *Amen.*

The End of the Second Part.

THE THIRD PART OF THE Spagyrical Pharmacopœa.

Wherein is taught, how by Salt and Fire, the Vegetables, Animals and Minerals may by a *Spagyrical* way and method be Mundified, and how from them, Medicaments wonderfully penetrating and most speedily operating may be prepared.

As for the manner of reducing Vegetables, Animals, and Minerals, by Distillation into good and pure Medicaments, by the help of the Spirits of Salt, thus stands the case: The manner and way of distilling Vegetables, Animals, or Minerals *per se*, after the common manner or way into Oil, Spirit, and Volatile Salt either in a B. Sand, or naked Fire, which hath been long ago, and also is at this day in much use, I cannot in all respects commend, because that such Spirits, Oils, and Volatile Salts, (whether from Animals, or Vegetables) do all of them stink, and

though they be often rectified, yet do they not totally lose that innate stink gotten in their Distillation, but do always retain a kind of an ungratefull *Empireum*, and are thereby loathsome to the Sick (and that not without cause too) whereas otherwise they have abundance of virtues; but being rectified with Spirit of Salt (as I have taught in the second Part of my Furnaces) they become pure, and losing their stinch are gratefull and acceptable, but not at all so without that rectification. Now all Men know, especially the Spagyrists, that the chief virtues of Vegetables and Animals are placed in their Oils and Volatile Salts, (for you must note that in Minerals the contrary is found, for their mercurial parts are most virtuous) but both Oil and Salt do in distilling by a Retort pass over adust or burnt, and therefore are not made use of, and (the more's the pity) are serviceable to none. For all such as distill the Oils of Vegetables, by the apposition of common water, in Copper Stills, do know how very little a Portion is obtained by such a process, and that the greatest part of them (Oils) do abide in the Still, and are of no profit, because common water can't be made hot enough, to drive out the fatness, but it gives onely some little portion, the residue is made thick and tenacious by the boiling, and remaineth in the Herbs: Hereupon some Men knowing this thing, do add to the Herbs common Salt, and Tartar of Wine, whereby the water being rendred one degree hotter, gives more Oil: This is a way that I do indeed approve of, but yet the one half part of the Oil will not ascend, and therefore distilled Oils are commonly very dear, especially if made out of dear things. Whereas if the Oils were distilled by this method of mine, they would have much more Oil, whereby the poor might also buy them. I will instance in one similitude whereby it

shall appear, what great profit may be made by distilling of Oils according to my method, and what a vast difference there is betwixt my method here described, and the common usual way. Suppose therefore that I seek after an excellent Medicine for the Stone, and that I do certainly know that it lies in the Ash, (as I have clearly enough discovered in the first and second part of this *Spagyrical Pharmacopœa*, certainly knowing, that the Oil distilled out of its Seed doth (by manifold experience) far exceed all other Medicaments against the Stone.) This Ash indeed yields a prety quantity of Seed, but much of that Seed yields but very little Oil, because 'tis resinous, and doth not distill over with the water, and upon that account is prepared but by a few, and such poor Men as are sick, can't partake of it because of its dearness, and this is much to be bewailed, that the Omnipotent God should set before our Eyes this Medicine in such plenty and yet no body enjoy it. Besides this is to be observed, that if some diligent Physician should distill such an Oil, and yet not know how to correct it according to my method, he may sometimes do more hurt than good, because that Oil brings over with it a certain volatile Salt, which (infects or works on) the Copper Vessel it is distilled in, and the Copper refrigeratory which it passeth through, and is usually thereby rendred yellowish, or green, and hath been by many discreet Men made use of without any regard thereunto, and (by reason of the Copper) hath put a nauseate and debility of Stomach upon the Sick, and hath been more hurtfull than beneficial. But now if they had rectified it with Spirit of Salt once, or at least well shook it in a Glass with the said Salt Spirit, that so the Copper might have been extracted by the Spirit of Salt, and so have administred it, they had done

well, and would have gotten a most excellent Medicine, though I confess somewhat dear, (proceeding this way) because that a Sackfull of the Seed, and as much as a Porter can carry at once, will scarce give two ounces of Oil, and this is too dear for the Poor Man's Purse.

For the sake therefore of all sick People as well Poor as Rich, I will discover my way that I use in getting the Oils, Spirits, and Volatile Salts out of all the Vegetables, and that in good quantity, and with very small Costs, that so all Men may partake of the gifts of God, and may all have occasion of giving thanks to the Creator of all good things.

Take therefore in Gods name whatsoever Vegetable you list, and fill a great Glass Retort therewithall, and by degrees distill over all that will come. Separate the Oil from the Spirit, and the Spirit by rectification from the Volatile Salt; rectifie also this Volatile Salt, and the Spirit upon its own *Caput Mort.* or upon some other Salt of Ashes being first fired and calcined, and so they will become pure and lose that fetid stinch that they got in the Distillation: If one rectification is not enough, add a second or a third, always provided that it be done on the fixed Salt of that Herb out of which you drew the Spirit. Now though the Oil be also depurated by a rectification upon the *Caput Mort.* yet that depuration and rectification is not comparable to this of mine which I mention here, and therefore well do we prefer this way, and 'tis thus.

Take your black distilled Oil, put it in a Glass Retort with six or seven times as much rectified Spirit of Salt, and give first a gentle Fire, then a greater as the thing requires, so the Oil will pass over pure with the Spirit of Salt, and the stinch together

with the blackness, will stay behind with a part of the Spirit of Salt. If now you will have that Oil yet purer, then rectifie it again with new Spirit of Salt untill both the Odour and Colour thereof please you. As for the Oil that stayed behind and did not ascend, separate it from the Spirit of Salt, and 'twill be somewhat thickish like to a black Balsam, and hath great virtue both inwardly and outwardly, but its inward use we need not, for we have enough of the pure Oil for that purpose. But that I may be yet farther serviceable to my Neighbour, and that he may understand me more thereby, I will make use of this similitude or example. Put case, that I have some four, five, or six pounds of the Seed of the Ash, which falls from the Trees in the Month of *September* or *October*, I do fill a Retort with the Same and by it distill the said Seeds, and I usually have about one or two, sometimes three, four, five, or six drams of black Oil, some ounces of Volatile Salt, and some pounds of Acid Spirit: Now forasmuch as I seek for the Oil onely, I separate this from the Spirit, and rectifie it with Spirit of Salt untill it becomes pure, and this I keep for my use; and I make of the Spirit either a certain Essence, as I have taught in the first part of my *Pharmacopœa*, or sugered Tablets, (or Lozenges) or what I please: And by this way do I get more Oil out of five or six pound of the Seed of the Trees, than otherwise by the *Vesica* or common hot Still, out of 100 pound, and that which remaineth after rectifying is profitable for external uses, if it be prepared as follows, *viz.* Separate this thick Oil from the Spirit of Salt and mix it with Wax, that so it may be made somewhat thicker, so as to be spread like an Emplaister, the which put upon the Reins, and use the distilled Oil inwardly, and thus this Emplaister will perform as much outwardly as the distilled Oil

operates inwardly, and so the Patient is thereby doubly repaired and helped. And if you desire yet a third way of healing, then rectifie the acid Spirit well, and dissolve the Volatile Salt by subliming it with the Spirit, and use this Spirit every day (besides the inward use of the distilled Oil) on this wise: Heat it a little, and dip in it some Linnen Cloaths and therewith wash or bath the Back and Reins putting on the Emplaister afterwards, and hereby the Sick Person will in a short time (unless God doth in a singular manner put a stop thereto) certainly recover.

Note well, after this manner may you distill all other Vegetables into Oils, Spirits, and Emplaisters, and make use of them in this Disease, such as are Saxifrage, Parsly, Cumin, Carraways, and such like other Herbs and Roots: Neither is it always necessary to have the Ash Seed, unless you please: For that this Tree is not to be had in all places, and it yields also at some Seasons but little Seed? *N. B.* Here some may demand and say, you have taught us the manner of preparing Oils, Spirits, and Balsams out of the Seeds, but now if such a Medicine could be made out of the Herbs it would be something, for whence shall so much Seed be had? I Answer. If thou hast not so much Seed, thou may'st make the Medicine out of the whole Plant, as the Root, Stalk, Flowers, and Leaves: And the reason why I mentioned onely Seed, was this, because the chief virtue of all the Vegetables, is occultly placed and concentrated in the Seed, else the whole Plant may (as aforesaid) be made use of, which although it yield not so much Oil as the Seed does, yet may we even this way receive a good quantity: And if we should neither take Seed, Herb, Leaves, or Stalks, yet would the Root alone afford much Oil; but in Trees, as in Ash, Linden, Nut,

Cherry, Peach, and the like, the very bare Wood it self will abundantly supply, if distilled *per descensum*, or by a Fire of suppression (of which afore,) so that a little Ash if rightly handled may afford you some pounds.

Nor are you to suppose that this way of plentifully preparing the Oils of Vegetables and clarifying them by Spirit of Salt, serves onely for such Vegetables as are good against the Stone, because I have onely instanced them as examples; No, but even all Vegetables, serving for every Disease, may be by this aforeshown way reduced into most sweet Medicaments. Nay not onely Vegetables may, but also Animals and Minerals too, but with some difference and distinction, which we shall mention in what follows.

There remains yet one thing more to be mentioned about the Oils of Vegetables, and the Distillation of them, and 'tis this. Some or other may reply and say, that haply such Oils as are prepared first by a Retort and *per descensum*, and then rectified and clarified by Spirit of Salt, are not equivalent in their virtues to those which are distilled in a Copper by the help of Water. For prevention of this Quæry, and the removal of such needless cares, we do in the first place demand, in what the virtues of the Animals and Vegetables do consist, whether or no in their connate and occult property, or in the Odour, Savour, and Tast. For answer, the greatest virtue of most Herbs, and living Creatures doth for the most and greatest part consist in their Co-nate or Co-born nature and property, and not in the Odour or Savour, as is sufficiently evident in some Plants, which have scarce any Odour or Savour, and yet are found notably efficacious in Medicine, and some there are

both of a Sweet Odour and Savour, which have no Medicinal use, and some that have an ungratefull Odour and Savour, and yet have no mean Medicinal Virtues. And many there be of things which both smell and tast sweet, and are also profitable in medicine, because God hath created them so or to that intent. I must needs confess that sometimes an Odour or Savour of such an Herb as hath but little virtue is notably refreshing and comfortable to the Vital Spirit, nay more, the very seeing of a fair and comely thing is capable of comforting the Heart, and an ugly thing of debilitating it; a notable example hereof we have in a friendly man, and in Gold, as being things which by the very beholding of them do refresh the Heart, whereas contrariwise, an angry man, and a venemous Creature do terrifie it, (*viz.* the Heart) and as 'twere make it Sick, yea and sometimes kill outright. Besides, not onely the seeing of such and such objects do profit or hurt, but even the very voice of a man, or of a living Creature do hurt, weaken, and kill, if proceeding from a malignity. Farther, the bare imagination can effect good or evil, heal or hurt; but this belongs not to this place, but such things are treated of in my short Treatise of things natural and supernatural. That which I have here spoken is to this end, that the unskilfull might know, that the virtues of Vegetables do consist more in their Co-born Nature than in the Savour or Odour, and that this Distillation by a Retort, and rectification by Spirit of Salt, can neither add to or diminish from their virtues, because their virtue remains always unhurt, in what manner soever the Distillation be made, provided that that which is distilled be diligently depurated, and all the ungratefulness removed therefrom which it got in the operation, that is to say, when Oils are adust (or

Savour of burning) by their being distilled in a Retort, then that accident may be taken away from them by rectification with Spirit of Salt, and this now I add for the sake of the Ignorant.

Moreover as it is with Vegetables, so likewise must you order your distillation of the Oil, Salt, and Spirit of Animals: Neither need you to proceed farther or otherwise. As for the Vertues of both Animals and Vegetables, the Physician ought to know them by their Signature, and not by the books of Writers, because the Signature doth shew us the Vertues of all things much clearer and righter than many Writers, who write many things meerly from hear say, whenas themselves do in truth know very little or nothing at all. And thus for this time I omit to say any more, for that the present occasion will not admit of a more prolix discourse hereabouts. What I have done is for the Sick that are poor, that they might know my method of purifying the Spirits of the Acid Salts from Vegetables or Animals, by Spirit of Salt, and of bringing them into wholsome Medicaments: And this cannot be accomplished so plentifully without this Medium; and now this way being shown, the Poor may also enjoy the benefit of them, and be able to pay the Apothecary, whenas before even the Rich could hardly have any of the good (in them). Note well, you are yet farther to observe, that indeed the Animals are first to be distilled by a Retort (as we spake before concerning the Vegetables) that so their Oil, Spirit, and Volatile Salt, may pass over together; and their Spirit and Volatile Salt may be rectified and purified the aforesaid way. But the Oil will not come over by a bare Spirit of Common Salt, or of Niter, but that Spirit must be first concentrated with *Calaminaris*, and then it brings over the Oils of Animals, else not.

But as touching the Concentration of the Acid Spirit for this rectification, we shall speak of it anon, and will therefore first set down (for better instructions sake) one certain process of distillation and rectification, lest any might err, and that all might rightly apprehend my meaning; and 'tis this: Take some pounds of Turpentine, distill thence an Oil, and the Fæces of the Turpentine will stay behind. This Oil though it be rendred by Distillation purer than 'twas before, yet it hath put on another nature by means of the Fire, *viz.* an hotter nature, and therefore serveth not for every effect which the Turpentine before served for, because the Turpentine is not very thick nor very thin, nor too hot or too cold, nor too subtile or too thick or gross, but is of a temperate essence and property, which now by Distillation it possesseth no longer, but, because of its heat and subtilty, it is unusefull. Well, what of all this? Why some or other might have objected to me that indeed things are by distillation rendred more pure and subtile, but doe thereby get an hotter nature and vertue, and therefore that way of purifying doth not doe well in all subjects. Well, to prevent this objection, and that the distilled Oils may after their purification be restored to the same degree of thickness, rarity or thinness, colour or frigidity, that they had before, and yet retain the purity they got by distilling: the method is easie, and is thus done. Suppose that Turpentine be (as it is Turpentine) hot and subtile in the first degree, but being distilled it arrives to the third degree, and being rectified to the fourth. I must now needs confess that that subtile Oil is to be used onely in cold affects, and in no others, whereas it might before have been employed about other accidents. To this I say, and yield, that if it be proceeded with after the common and known way,

'tis so: But my way is far otherwise to be reckoned of: For though hereby the things distilled doe, together with a purity, get a subtile heat, and doe in some operations become too thin and hot, yet in rectifying by the Acid Spirit, such qualities are broken, divided and dissipated, so that it is in part rendered of a like thickness and tenacity as it was at first, and a part of it remains subtile. So that you may have out of one subject, both thin, hot, thick and temperate parts together, but both of those parts pure, as shall be evinced by this Example.

The Spirit of Salt, or of Niter is indeed inwardly a mere Fire, but externally a mere Cold, by which all thin things do stiffen and wax hard. Therefore as the distillation doth induce heat, expels and extenuates, so the rectification doth by the acid Spirit compel or drive the same inward, thickneth it, and reduceth it into an equal temperature: For the Oil in the first distillation is plainly hotter and subtiller both within and without, than 'twas before, but by rectifying it with the acid Spirit, the most subtil part comes over first, then the middle part, and the thickest resides in the bottom, which is of an equal degree of heat and thickness as the Turpentine is, and is as usefull both inwardly and outwardly as the Turpentine it self is. And I have over and above that middle Oil, and that most subtil Spirit burning and penetrative, the which I can make use of for those effects, which require such subtilty, or if I lift, thicken it with what I left remaining of it self behind, which is thick, but yet purified, or else thicken it with some other convenient thing. And thus may I reduce one Subject into as many Degrees as I please, whereas the Turpentine had before but onely one Degree: From hence may the friendly Reader see what *Basis* this my distillation and rectification by an acid Spirit

hath: Whereby not onely a great deal, yea 3, 4, or 5 times more Oil comes over than by the common hot Still; but also the Volatile Salts and the Spirits, and sharp Vinegars may be hereby gotten out of Vegetables and Animals, and besides a pretty quantity of thick Oil to be externally used, and which otherwise in distillation by water in a *Vesica* or hot Still, would remain wholly behind. The benefit therefore of this distillation and rectification, doth not onely consist in the getting a far greater quantity of the pure Oil, but also in getting the Volatile Salt, (which as to its use is equivalent in vertue to the Oil) and withal, an acid Spirit which abundantly sufficeth both inwardly and outwardly according to its Office. I do therefore earnestly demand of all skilfull Spagyrists (for 'tis in vain to appeal to such as are yet ignorant what the Art of Fire is) whether or no this distillation is not to be preferred before the others, and to be made use of for the benefit of mankind. I hope that the well minded Reader will follow this rule, and will apprehend from this one process onely, so much as to be afterwards easily able to reduce every distilled Oil into its former hardness, by the help of an acid Spirit. Let us consider Amber onely, 'tis indeed a fine transparent kind of stone, which was before (or at first) soft and fluid as Turpentine was, an Oil or a kind of thin Bitumen, but now so hardened by the salt Water that it may be beaten to a Powder, yet may it be distilled and so separated and cleansed from its earthly Nature: And the pure Oil may be reduced into its former hardness, by the help of Spirit of Salt onely: For it became at first hardened by Salt, when it flowed thin out of the Rock: But of this enough, we shall say more of it in another place.

Now follows the Process of purifying Minerals by distillation or sublimation, and of depurating them

even to the utmost, by rectifying them by an Acid Spirit. To exemplifie which, I will instance in Common Sulphur, according to which rule the other purification of Minerals may be instituted.

Take common Brimstone, sublime it the usual way into Flowers, or by it self in a Coated glass retort, or let it be mixt with decrepitated Salt, for so will it be freed from its most crude terrestreity, and be rendered fit for a farther Mundification by an Acid Spirit. Take one pound of these Flowers of Sulphur, and put it into a strong Glass Body coated, then pour in one or two pounds of the Spirit of Niter, or of common Salt, and place it in an Earthen-vessel in Sand: Put there under a Fire, encreasing it gradually untill the Spirit of Salt boils in the Retort, and the Sulphur melts, and there will swim somewhat like Oil on the top of the Water: *N. B.* An Alembick is to be put on the Body, lest the Spirit of Salt ascending up, goes away in fume; but in the Alembick it will be refrigerated, condensed, and may be saved. This boiling is finished in some five or six hours, and so the Sulphur is mundified, and becomes as clear and transparent as Glass. For the Spirit of Salt attracteth the Metalline Parts, which are in the Sulphur, whether it be Copper, Arsenick, Auripigment, Vitriol, or such-like impurities which are commonly adherent, and stickers on to the Sulphur, and would otherwise have remained in it, and done more hurt in Medicine: And this *Paracelsus* knew, and adviseth to beware of; For certain it is there lye hidden in Sulphur incredible Vertues, and such as its common Flowers do not shew or discover, as being yet infected with Mineral venenate Spirits, which may be taken thencefrom by the Spirit of Salt. And if then either the Flowers be sublimed out of it, or that it be dissolved in a Balneum with Spirit of Juniper, or of

Turpentine, or be by any other way reduced into a Liquid form, it doth much good in Medicine, nor is there any more fear of its venomous nature, for the Spirit of Salt hath took that away. I could indeed here mention some preparations of Common Sulphur, into efficacious Medicaments, but that I have intended to proceed no farther with it here, than onely as touching its purification by the Spirit of Salt: the rest we will leave to another time.

As Sulphur may be proceeded with, so likewise may you deal with the other Minerals, and first mundifie them by a Retort, and distill them into black Oils, then may the Oils be clarified with Spirit of Salt, and be reduced into sweet Oils and Balsams. Nor will any man easily believe what notable Vertues there are hidden in the mountainous and terrestrial Minerals, and yet not usefull at all inwardly, because of their Arsenical nature, which may with ease be taken away from them by Spirit of Salt, and be thereby more securely used as to Medicine. And had I not purposely tried it, I would not at all have written of it. For information therefore of the unexperienced, I will tell you a story, whereby it will appear, that those Minerals do usually lodge in them evil and venomous Arsenical Spirits.

In the County or Province of *Erbach*, scituate between the *Mœne* and *Neker* in *Franconia*, is found plenty of a Sand knit as it were together by a fluid Mineral, and grown together into huge heaps like little Mountains of a duskish colour; which if you lay on burning Coals, emits a sweet odour altogether like Amber. When I saw it, I put some into a Retort, and distilled an Oil thencefrom, wholly like the Oil of Amber both in colour and smell, and had used it in its stead, had I not shortly after tried another knack:

For ordering the Chambers to be fumed with the Sand, because it yielded such a fragrant odour, I very seasonably observed that that fume was unwholsome and venomous, for it caused pains of the Head, and a kind of nauseate, 'twas also offensive to the Stomach, and this made me leave off my Fumigations, and set about rectifying the Oil thence distilled, by the Spirit of Salt, and by this means I got a clear and pure Oil, and the Spirit of Salt attracted to it self the Arsenical Essence, which being purged and rectified, yielded me at the bottom real Arsenick, whence I perceived that all those Minerals are very Arsenical, and no ways fit for internal use, unless they be first mundified by the Spirit of Salt. Many such kinds of Minerals are to be found, which we neither care for, nor know: some of which are as hard as a Stone, some thin, some fluid like Oil; such an one is that Fountain about *Baccharach* that boils up in the middle of the *Rhine*, and fills the whole *Rhine* for about three miles space and an half with its fatness, and yields a most fragrant odour, is of a duskish colour. For as I was ferrying by it, I took up some of the water in my hand, and questionless the Fountain of it must needs flow very plentifully, forasmuch as the whole River *Rhine* is filled therewith as far as you can see, and yet scarce one Man amongst a hundred or a thousand doe in their sailing by it take notice thereof. Doubtless this Fountain hath its efflux and rise out of the Mountains which border on each side the River. Did it break out at the top of the Earth, it would be worth Gold and Cedar, but lying so deep, 'tis of no use. Were curious Men inhabitants there, they would doubtless find out this Fountain; For on this part of the *Rhine*, where the City *Baccharach* lies, is a high Mountain, where grows pretious Wine, and is in Foreign parts sold at a dear rate, because of its

most sweet savour and odour, and by the Inhabitants is called Muscadel, and 'tis a sort of Wine produced onely in this Mountain; nor can the neighbouring adjacent places make the like. Hence I presume that this Fountain at *Baccharach* ariseth from a Mineral Oil, flowing out from this Mountain into the *Rhine*, and that hence also ariseth the goodness of the Wine. And whereas this Mountain affords not such a quantity of Wine as the Inhabitants wish, they bethought themselves of a remedy for this scarcity, casting in Herb-scarlet into the common Wine, from which it got the same kind of taste, and became almost Muscadel. Nor let it seem strange to any one for the Wine to attract a savour from the Earth lying about it, for 'tis very certain, and I my self have tried it; And since it is so that this matter affords me opportunity of speaking of these things, I will give you my opinion more clearly in what follows.

Below *Frankford*, some four miles from the River *Mœne*, there lies a Village called *Hohenheime* under the *Moguntia* Elector, and there's a Mountain which yields very good Wine, though not of so delicate a savour as that of *Baccharach*, yet 'tis of a sweet smell, whereby it exceeds all the Rhenish Wine, and is therefore dear; The cause of this, I attribute to the Soil, in which the Vines grow, which Soil brings forth Stone Coals, and were heretofore digged hence, and are now again sought after, which Coals have in them a sweet Mineral Oil, as I shall shew you. Farther, there lies a high Mountain at the River *Mœne* about the Castle *Klingenberg*, scituate between *Odenwall* and *Spessart*, where that Earth is found too, such as I above mentioned, which yields a sweet Oil in distillation. And this Mountain doth likewise produce sweet and good Wine, so that it yields not a whit (in its kind) to that of *Baccharach* or

Hohenheime. But now whether or no the Mineral Oil that is not far off to be here found, be wholly the cause, I doe not affirm, but I believe it, for my part, so to be, let another follow his own opinion. There is also a great Mountain at *Herbipolis*, at the *Steine* so called, that yields pretious Wine, but not of a savour like these three. Hence arose that Proverb: At *Baccharach* on the *Rheine*, *Herbipolis* on the *Steine*, *Klingenberg* on the *Mœne*, and *Hochheime* on the *Rehn*, are the four best Wines.

I confess there grows good Wine every-where on the River *Mœne*, but yet these four do far exceed all the others, and that haply because of that sweet savour which they attract out of the Earth where they grow. For it is certain that the Vine doth draw an odour and savour (more than all other Plants do) out of the Earth, whence it hath its nutriment: So that it is not very difficult for a good Physician to communicate to the Vine any savour that he listeth (which will be) according to the nutriment which is put to the Root. I make no doubt but that there will be some Zoilists that will make a mock of these Reasons of mine, as concerning the ground and rise of the taste of the Wine at *Baccharach*, *Herbipolis*, *Klingenberg* and *Hochheime*, and will not attribute the cause to the Soil, but say that my Reasons are invalid shallow ones, the which derision I shall patiently undergo: such kind of Men will rather drink the good Wine even to excess, than produce any reasons whence the savour proceeds. But I speak experimentally, and say that the Vines do attract a savour from the Soil whence they are planted, the which I have many a time tried and found so to be. Verily the Gardiners know, that Man's dung will give a nutriment or encrease to Flowers, but yet will put an odd smell upon them; And therefore do they

carefully shun the putting it to the Roots of sweet-smelling Flowers, but use it rather to such as are void of odour, as Tulips and such-like, that so they may grow the sooner. 'Tis also evidently observed, that if the Root of the Vine be planted in such a place where Man's dung lieth, it acquires an unpleasant odour, and the Grapes are thereby rendered unfit to be eaten. Besides, the most curious Vine-dressers have long ago attained to this experience, that if the Scarlea or any other odoriferous Herb be applied to the Root of the Vine, it will bestow its Odour on the Grapes, (but it serves for no more years than that onely) whereas if they pour upon the Root an Oil of a sweet and strong Odour, that Vine will produce Muscadel for ten years and more, the which I have handled at large in the Vegetable work, and do mention it herein briefly upon this account; Because that a Mineral Oil lies hid in the Earth in abundance, the which being incorporated in Plants, but in Vines especially, produceth excellent Fruits, whereof but a few Men have the knowledge.

But now that I may yet demonstrate this more clearly to the unskilfull, and consequently incredulous, *viz.* that there is a most great sweetness in the Minerals, which may here be extracted by distillation and rectification with Spirit of Salt, I will instance this example: 'Tis well known to all Men that the Stone Coals which are in many places digged out of the Earth, doe (being burnt) emit an ungratefull Odour, and are hence usually esteemed of as venomous; but in those places where they are plentifully digged, they are daily used in coction, nor doth any hurt arise therefrom: So that it must needs be acknowledged, that they do not stink of themselves, but that the Fire onely is the cause of the stink, and that their innate fatness is of a savoury

and sweet-smelling nature, yea so sweet as any Vegetable, as I can easily evidence. You have an Example in Roses, or any other Vegetable, which if distilled by a Retort, loseth its sweet odour, and puts on a smell of burning too: What hinders from being so in Minerals, as in Pit-Coals, and the like? I grant indeed, that if enough Oil would come over out of the Vegetables by an hot Still, there would be no need of this distilling by a Retort, and rectifying by Spirit of Salt, because it requires a great deal of labour; but forasmuch as there doth not distill enough over, 'twill behove us to acquiesce in this method. Nor fear I to affirm, that if it were possible to distill an Oil out of such Coals by a hot Still, it would give place to no Aromatical Oil whatsoever in the sweetness of the smell. From whence, I pray, should so many kinds of Herbs draw such various Odours and Savours, were there not lying hid in the Earth an Universal Sulphur or Balsam?

But to put an end to this discourse, and that I may shew that the Pit-Coals do contain in them an Oil or pretious and wholsome Balsam, no whit inferiour as to its Vertues to any of the most pretious Oils or Balsams brought us out of the *Indies* observe but this process.

Fill a Retort with Coals, and distill a black Oil, the which separate from the Acid-water that came over the Helm with it, and rectifie it by Spirit of Salt, and so there will first of all come the clear and pure Oil, then a yellow Oil, not so sweet as the former, and the thick and black Oil remains behind, and serves for to be mixt with Emplaisters; for 'tis a wonderfull healer, by reason of its innate siccity; now the yellow Oil may be yet farther rectified once more by Spirit of Salt, that it may become pure, white, and fair: But if

you are yet farther minded to make a difference betwixt these pure Oils, and will again rectifie them with new Spirit, then shall you take the most pure part by it self, which as to heat, subtilty, and sweetness, is fully equal to the true Oil of Peter; and which being kept apart, and used for cold accidents, both inwardly and outwardly, will do the same, yea and much more than is attributed to the Oil of Peter. Nor is there any fear at all of these Oils being Arsenical, for the Spirit of Salt hath took off all the Arsenick in the rectification, and if you please you may use the Oil which comes next after the most subtile Oil in mixing it with Balsams, or it may be safely used by it self, either inwardly or outwardly, and 'twill perform wonderfull things, and such as exceed belief, forasmuch as in Pit-Coals lieth a most great Balsamick vertue; If the depurated Sulphur which we spake of afore be dissolved with this Oil, and reduced into a Balsam, thou shalt have a Medicament, which may deservedly be styled an Universal terrestrial Mineral Balsam, and doth both as to inward and outward uses far exceed all other Balsams: And therefore 'tis in my mind to prepare this Balsam in great quantity, for the benefit of Mankind: The most notable Vertues thereof should I describe, the very description would amount to a particular Treatise, but that belongs not to this place, but it sufficeth me to have at this time explained the manner of the preparation. I may haply (if God please) more largely teach concerning its Vertues, another time, as likewise the Vertues of the rest of my Medicines.

And thus will I put an end to the Third Part of my *Pharmacopœa Spagyrica*, in which I have (in my opinion) mentioned sufficient enough; and although

it be but a small Book to sight, yet do great things lie hidden under it, which one amongst a thousand will scarce comprehend. But that the well-minded Reader may understand, what reality there is lies hidden in this Treatise, I will here teach by way of an Appendix one Process onely, whereby it shall evidently appear how noble the Art of Purging things by distillation is. This operation is well enough known in the Vegetables and Animals, *viz.* that always from the thing you distill, the purer part comes over first, then the more vile part, but the unprofitable earthiness abides in the bottom with the fixed Salt. Now in Metals this Process is not so well known, nor will it be so soon made publick and common, nor indeed is it expedient, for this world is not worthy the knowledge thereof. But that I may satisfie my promise, and shew, that Metals may by distillation be made Spirits, and purged in the highest degree. I will make use of this following Example: 'Tis known to every one, that if any dry thing is to be distilled by the fire, some moisture must be mingled therewithall, which may attract to it self the gross and heavy part, as you may see in the common distillation of Herbs, to which Herbs (when dry) Water is added, with which their savour and vertue distilleth over: And to every dry thing there is requisite its proper humidity, which must of necessity have a Communion or Affinity with the dry, if it be to bring over the dry with it self. Now common Water is able to carry over (in distilling) the odour and savour of Herbs, yea and of Salts, but not of hard Sulphureous or Mercurial Minerals, much less of the fixed Metals. But forasmuch as Metals are Homogeneal, and cannot be purged by any force of Fire, nor separated from the impure part, unless they be dissolved by agreeable and convenient

Menstruums, and be rendered apt by distillation, for always that which is brought into Flores doth (if reduced) yield such a Metallick body as it at first came from. Thence arose an opinion of an impossibility of separating the pure part from the impure. Indeed to the blockish and unskilfull all things seem impossible, and therefore from them is not to be lookt for any judging of good secrets.

But to return to my purpose, and shew that a Golden Essence may be distilled and separated out of the crude Metals by Distillations, I will make use of a common Example. Dissolve in a Common *Aq. Fortis*, made the usual way of Niter and Vitriol, one Ounce of pure Silver; which being wholly dissolved and reduced into pure Water, pour out the Solution gently into another Glass, that so if haply any Gold were mixt with your Silver it might stay behind, and not be dissolved, or mixed together, lest the Experiment prove fallacious. Then some common Salt is to be dissolved in common Water, the Salt to be in weight equal to your Silver; and this Water is to be added to the dissolved Silver, and to be so long poured out of one Glass into another untill it be well mixt, then let it settle, and let the pure Water be poured off, and a white Powder of the Silver will remain, which is again to be macerated with pure Water several times, untill the Calx of the Silver be freed from all Saltness and Corrosivity; Then dry it, and you shall have a white and tender Powder, and very fusile, so that it will melt even with the flame of a Candle, and is not unlike to a *Mercury*, but may well be called the *Mercury* of *Lune*, but the Chymists usually call it the horned *Moon*, for being molten it resembles the shape of an Horn, and with this may be wonderfull things effected both in Medicine and Alchymy; but belongs not to this place to speak of,

and therefore are to be but just hinted. And like as we have spoken of *Lune*, so likewise must we proceed with *Saturn*; and he will also yield you a white Volatile and fusile Powder, as easily melting, yea easier than the *Mercury* of Silver, and is deservedly called the *Mercury* of *Saturn*. These two are willingly associated to a third, *viz.* to Common *Mercury*, and do fix him, and so is that Axiome of the Philosophers fulfilled, *Nature rejoyceth with Nature, Nature overcomes Nature, Nature retains Nature*. Farther, these *Mercuries* do admit of distillation and a separation of the pure part from the impure, no otherwise than as doth a Vegetable. But the way of doing this is not to be so hastily written, I spent a whole year in searching after it, till I found it, and so let another seek; and if God grants it him, he may enjoy it; And if God vouchsafeth him so much, he will also give him the knowledge how to use it: If the *Mercury*, which in it self is white, volatile and fusile, is rendered more white by distillation; 'tis also a necessary consequence that it will become likewise more volatile, more fusile, and more pure: but of this enough.

But to come yet nearer to the matter, and to shew that Metals may be so separated by distillation as to become golden, take this Example: Take two Ounces of the aforesaid horny *Lune*, and reduce it into Corporeal or pliable Silver, and separate it by a Cupel, for then thou art assured that no other thing is in it but Silver: Dissolve this Cupellated Silver again in common *Aq. Fortis*, and it will leave a good part of Golden Calx. Now it may be demanded, whence comes this Golden Calx? Comes it from the Silver, or the *Aq. Fortis*, or from the Salt-water, all which three were in use in the precipitation? I answer, that the Spirit of Niter brought over with it

self, in the distillation, a certain Goldenishness from the Iron and Copper which were in the Vitriol, and that in the form of a Spirit, and assumed its Body from the *Lune*. Now if any other Body concludes it to be otherwise, *viz.* that the aforesaid Gold comes from the *Lune* onely, and not from the *Aq. Fortis*, I do but ask him this Query, Why the very same sort of Silver, being dissolved and precipitated out of the *Aq. Fortis* with Salt of Tartar, or by Copper Plates, be not equally as golden as this is which is precipitated with Salt-water? But some may yet urge farther, that this Gold proceeds onely from the Salt with which the Silver is precipitated, and not from the *Aq. Fortis* or Silver, because the Silver being dissolved in *Aq. Fortis*, and precipated with Brass Plates, or the Liquor of Salt of Tartar, yields no Gold; but that onely gives Gold which is precipitated with Salt-water. To answer this Objection, and clearly to demonstrate that this Gold owes its Original to them both, *viz.* the Tincture to the *Aq. Fortis*, but the Body to the Silver, and not to the common Salt, (for though there lies hidden in all common Salt a certain Golden power, which may be thence drawn by Art, yet that is not to be done this kind of way, but by another, which we mention in our Book called *the Consolation of Sailours*) I do certainly know, that this Gold proceeding from the precipitated Silver, doth arise from the Vitriol and Silver onely, and not from the Salt: And this may be clearly observed thus; If you add to the Vitriol and Niter a Verdigrease prepared with Sulphur and Salt, the *Aq. Fortis* will be twice more Golden than if 'twere made of onely Vitriol; the reason is this, because the Iron and the Copper are fixed in the Vitriol, and do not easily yield Gold; but if the Copper be first reduced with Salt and Sulphur into a Volatile Calx, and be added to the Vitriol and

Niter, then is this kind of Labour done to profit, else not: This which I write is onely to demonstrate the possibility. And should you add to the Vitriol and Niter, or to Allum and Niter, other Species containing Volatile Gold, as *Calaminaris*, *Zinck*, and such like, the Water will be rendered so much the more Golden: But if you add to the Niter and Vitriol such Species as contain in them Volatile Silver, such as are *Cobolt*, *Bismuth*, *Arsenick* then the *Aq. Fortis* is rendered more Silvery, and makes part of the Copper in the Solution purely Silvery, like as the Goldenish water when 'tis in the Solution makes part of the Silver Golden. By which it is demonstrated, that crude Metals are depurated by distillation, and may be made Volatile, and that by that means of Solution, Corporal Gold and Silver may be precipitated out of the Metals, according as the Dissolvent is prepared out of Golden or Silvery Subjects.

This Example I account sufficient to evidence, that the crude Metals may be purged by Distillation so as to become golden. If then it be so with the crude and impure Metals, what then may be done with the pure ones if they be made by Distillation, yet more pure; without all question a most excellent medicine might be from thence prepared, and far to be preferred to Gold or Silver. This discourse do I here make use of to the intent that it may be seen, that even fixt metals being after a due manner opened and made volatile, are capable of sending out their best part, and of being separated by Distillation from the more crude part. But this Treatise appertains not to Alchymy but to Medicine, and yet I thought good to induce this argument, *viz.* (that out of crude Vitriol, may a volatile Gold be drawn by Distillation and be incorporated with Gold and Silver) to this end that all men might know of a certainty, how much good

may be done in metals by Distillation, and what a pure substance may be thence drawn. Nor doth *Basil Valentine* that *German* Philosopher, doubt expresly to write that the Philosophers Stone is full as easie, yea easier to be prepared out of Vitriol than Gold. If therefore the highest universal medicine both for man and metals may be prepared out of common Vitriol, why may not the same be possible to be done out of the purer metals if they were reduced into Vitriol, and so as to admit of Distillation, whereby the pure may be separated from the impure.

If now the common Vitriol of Copper and Iron, do in Distillation yield volatile Gold, why should not the Vitriol of *Lune* do it much more and yield it nobler, as being indeed the true and onely metallick Vitriol of the Philosophers, which *Basilius* appoints to be taken for his Work, and doth truely deserve the name of Vitriol. For if you would have your common Vitriol tinge, you must add Galls thereto, but this Vitriol doth truely blacken all things without Galls. But you must not imagine that I do here intend such a Vitriol of *Lune*, as is by solution (in *Aq. Fortis* reduced into a white Crystal, or such as is precipitated by the water of Salt out of the Solution (in *Aq. Fortis*) no such matter? For this resembles not Vitriol, because it may be again reduced (into Silver.) But the true Vitriol of the Philosophers is prepared out of *Lune* without *Aq. Fortis* or such like Corrosives, and is not reduceable in the strongest Fire, but remains a Vitriol, tingeth the Tonge, is astringent, and yields a golden Water, which dissolveth Gold and fixeth it therewith. Such a Vitriol will we make use of in medicine and Alchymy, and leave the common Vitriol for the Dyers. The Ancients called their Salt Vitriol, on this account, because that it did as to its external Figure resemble Vitriol, but

though they so called it, yet they took not the common Vitriol, which every wise man may be easily perswaded to believe. So then let the *Lune* be the Earth, Gold the Seed, and *Mercury* the (Water, but not the common *Mercury*) with which it is to be watered, and let the rest be committed to God and Art. Thus far have I declared to you my opinion, let every man follow his own. But thus is confirmed the assertion of that excellent Philosopher *Basil Valentine*, who affirms, that even out of common Vitriol may be extracted a certain goldenishness; how much more credible then is it, that a Vitriol prepared out of the more pure metals may yield a better goldenness. Every one may believe what I here write for I have oft times tried it, but yet I have received more Gold sometimes than at other some according as I ordered my process, and reduced my precipitated Silver; for you are to know, that such a kind of Silver as is precipitated out of *Aq. Fortis*, by the Water of Salt is wholly volatile, nor melteth it like to a Calx of *Lune*, but goes away partly in fume, and part is reduced into an horny Stone, and yet by a peculiar Distillation doth all come over, but enough of this. Hereupon is Salt of Tartar to be added to this volatile Calx, lest being molten it vanisheth away in fume, for Borax doth not prevent it. But it melteth better if it be help by that notable fluxing Powder, made of Niter, Tarter, and Sulphur, and it be kindled by a little Coal and burnt up, but then all the Silver doth not melt, but part of it goes away in fume. *N. B.* If you catch this fume which is a thing easily done, it resembles the form of a red Powder, and will abundantly recompence your pains, nor may that saying of *Paracelsus* be unfitly applied hereunto, *viz.* to corrupt is totally to perfect, because these Flores of Silver are not lost, but are of a greater price than

the Silver was. He that well knows this labour (for indeed experience is the best master) will not labour in vain. And if he learns nothing from this little here-taught, neither will he find out ought from a greater. For I have in these few words revealed much, yea haply more than I ought to have done. All which we do in the first and chiefest place attribute to God, next him to Niter, which renders Metals so fluxible. From hence may the well minded Reader percieve that there is in Niter, not onely a power to fix all volatile Minerals and Metals (of which I have treated in my second part of the Prosperity of *Germany*) but also of making them wholly volatile, so that they may be distilled and purged, as is sufficiently evident in the aforegoing example: Besides, there is another way of making Metals volatile, as well as by Niter, but so as that they be not wholly dissolved, but are by a moist nitrous Fire reduced so far as to retain the form which they put upon themselves in the said moist Fire, and yet they become so volatile, as to suffer themselves to be wholly distilled and sublimed, and will in the *Proba* give Gold, the which the gradatory Water hath made in them. But of these things more at large in the fourth part of the Prosperity of *Germany*: Thus with what hath been said, will I finish the third part of my *Pharmacopœa Spagyrica*.

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The End of the Third Part.

THE FOURTH PART OF THE Spagyrical Pharmacopœa.

Treating of the four principal Pillars of Medicine, *viz.* Sulphur, Vitriol, Antimony, and Mercury, but chiefly of the great harmony between the Superiour Elementary Sun and Moon, and the Inferiour and Terrestrial Gold and Silver, and the magnetick way of attracting the Virtues of *Sol* and *Lune* by the Air, and of rendring them palpable and visible.

READER,

After that I had intended to publish in the Fourth Part of this my Spagyrical Pharmacopœa*, some singular and excellent Medicines, and such as might much exceed all others, and so must consequently be prepared of choice and excellent subjects and matters; I accounted it my task in the first place to shew you out of what subjects*

such efficacious Medicines may be drawn and extracted, viz. *out of Gold, Wine, and Antimony, as likewise out of Vitriol and Mercury, but not the vulgar Mercury.*

Now although most Men are blinded with a thick darkness, but principally those that prosecute the truth with a deadly hatred, and do prate much, and by reason of their blindness and ignorance do affirm, that Gold being a thick and compact body is not at all fit to admit of such a preparation as thereby to display its most efficacious virtues in Man's Body: And as for Antimony and Mercury, that they are most present Poisons, and can't serve as Medicines without great danger; but as for Wine, that it is indeed fit to be drunk, but is of no validity in Medicine, not knowing how to imploy it about any Medicinal use, but are rather ready and skilfull Artists at swallowing it down in full draughts; however though they thus chat yet these objections are frivolous, and do proceed from their ignorance which is wrapped about with most thick Clouds, and which I refute by this brief and strong Reply. But I do not at all deny, that Gold reduced even to the smallest Powder, and so made use of (as 'twas wont of old to be by the Ancient, yea and latter Galenists, and is even too at this day) by mixing it with such Medicines as are for the comforting and strengthning the Heart and Vitals of Men, cannot contribute so much as the least Iota to the health and preservation of the body of Man: And so I say of Antimony and Mercury, that they are not at all salutiferous to Man's Body, but contrariwise are deadly and destructive Medicaments, untill (by a due preparation) they are deprived of all their Venenosity, and thereby rendred fit to be safely made use of. So Wine it self being taken per se as it is, is a restoring and refreshing Drink for Man, provided it be moderately used: But contrarily is a causer of many Diseases if it be frequently and in large quantities swallowed in, and

doth operate in Man's Body more hurt than good, this daily experience doth sufficiently testifie, and renders it evident, that being so immoderately taken, it fills all the Members of the whole Body with Tartar, and makes obstructions and stirs up intolerable Pains, and principally in the Bladder, Reins, and other parts of the Body, viz. *if coagulated in the Hands, Knees, and Feet, whereupon it doth not easily suffer it self to be exterminated, unless by such Artists as well know the properties and nature of Tartar, but of such Men there is at this day a great scarcity, and therefore that proverbial Verse still takes place.*

Solvere Nodosam Nescit Medicina Podagram.

The Art of Physick can't root out
(Thy dire Disease) the Knotty Gout.

But he who is so well skilled as to separate the fiery, penetrative, wholsome, and true Medicinal Spirit of Wine; Yea its true Balsam from its Fæces, he will easily expel out of the Body of Man all tartarous impurities and defilements, and will perform things wonderfull in the Stone and Gout. But now forasmuch as the educing so wholsome a Medicine out of gross crude Tartar is known but to a very few, no wonder that there hath been so little or rather nothing at all performed by Physicians in such like most grievous tartarous Diseases that have gotten deep rooting in the Body of Man. But the way how you may be rendred Possessors of such a Spirit of Wine shall be spoken of afterwards. Yet I would not that anyone should perswade himself that my meaning and intention in this place is about the common Spirit of Wine, or either that which is gotten out of Tartar by the usual known way of Distillation. No, there's a vast difference betwixt that Spirit which I here make mention of and the other. For in this Spirit the crude Tartar is

first to be washed by common Water from all its Defilements, and that without the addition of any other things, so as to shine like Snow, then to be afterwards made black by putrefaction, and out of that blackness the said Balsam is to be drawn off, of which we shall hereafter make a more ample Declaration. This now is that Spirit which doth Anatomically resolve the compacted Body of Gold, and converteth the venemousness of Antimony into a wholsome Medicine, and doth perform things wonderfull in all tartarous Diseases. 'Tis the true Wine of Health, and the very Aq. Vitæ *of the Philosophers, and hath a great familiarity with Gold and Man, and may be excellently compared with the coagulated solar beams.*

Therefore as it is evidently known to every body, that Gold and Wine are advanced on to maturity, by the heat of the Sun, and that Men do notably love and desire both of them. So may any one conjecture what Gold and Wine would do if a Man could but have them reduced to a spiritual essence. Hence now it seems necessary unto me, that before I pass on to the preparation of the said Medicine, I do in a few words describe the harmonial love that is between the superiour and inferiour Sun and Man, that so it may appear, what a bond or tie of love and necessity there is betwixt these three most noble Creatures of God, to one another.

CHAP. I.

Of the Harmony and Agreeableness between the Superior Elementary, and Inferiour Earthly Sun, with Wine and Man.

'Tis well known even to the blind Bayards and Barbars, that the Sun in the heavenly Firmament, is the most noble and most eminent Creature God

made. For it is that onely light which makes all the Stars partakers of its Splendour, Light and Brightness. 'Tis also the onely Fountain and as it were Father of all the Creatures, because if they are deprived of it, they are in the dark and die: Nay even man himself cannot live without the help of the Sun, and all things would perish, should the Sun be but one moment withdrawn from them. For all things that are do receive their Life and Augmentation from the Sun; and he was (according to *Moses* his Doctrine) the first and chiefest that did proceed forth by God's creating, and will doubtless be the last when all things shall be dissolved, and pass into a better State at the final Destruction of this worldly Fabrick. The Sun supplies the place of a heart in the wonderfull Structure of the Macrocosm: And in like manner the heart it self in man's Body is aptly compared to the Sun, as being the first liver, and last dier in the humane Fabrick; and this is known to every body. And therefore amongst all the Creatures indued with life and motion, man doth in nobility and magnificence excel them all, as having gotten his body from the earth, his Spirit and Life from the Sun, and his Soul from God.

But as to the insensible Creatures the highest Degree of Nobleness is attributed unto Gold, the which is likewise generated by the Sun. These three admirable Creatures, *viz.* the Sun, Man, and Gold are coupled with a bond of wonderfull Necessity and Friendship, and are conjoined by the instinct of Nature her self. Men do desire the Light of the Sun, as also its heat in a dark and cold Season, for thencefrom proceeds all life, and all the encrease of life, because the Suns beams do perform the office of the universal Spirit, and Life in the Conservation of the Life of Man. But now as touching Gold, men do

partake of that in a particular way onely, and one man is usually stored with a bigger Portion, another with a lesser, not by the instinct of nature, for she bestoweth it on us onely for our use, but by reason of the abusive malice, avarice and the unsatiable Covetousness of men; but yet this way is not the right manner of loving Gold, nor genuine, but false and oft times very hazardous. We should rather love it because of its wonderfull Vertues which it possesseth, hidden in its body, and may afford a most notable Comfort to man's sickness and infirmities. Verily the Ancient Philosophers were not ignorant of the incredible Vertues, which the Gold hides in it self, it being truely no other thing than a body consisting and compacted of the coagulated and fixed Beams of the Sun, and this was well known to those men who were most skilfull in the nature of all things. Seeing then that the Sun's beams being as yet unfixed can bestow on all things life and encrease, why may not the same be accomplished by them when fixed, and made constant, if so be they be rendred spiritual, and thereby be capable of displaying their Vertues in a visible and palpable efficacy, which thing they could not do if they retain their corporal Coagulation, nor can display their occult Vertues.

Many men have industriously attempted with great Labour, artificially to open Gold, and to reduce it to a spiritual Nature, and to render it living and efficacious, but few there have been that have been Masters of their desires, but such as at length had thereto attained, did perform things wonderfull in the sicknesses of mankind, and this is witnessed by many most true Histories, as for instance, by the *Turba* of the Philosophers, and by the *Theatrum*

Chymicum. The which Books do indeed describe such a notable secret, but so obscurely and intricately, as that no body can therefrom learn its preparation, unless God reveals it to them, or it be manifested by some good friend or other that knows the Art. 'Tis no wonder that amongst many thousands of Searchers, so very few do arrive to the knowledge of the same. For God hath barred up this so great a secret with such firm bolts, that all wicked and malicious men are easily excluded from the knowledge of finding it out. Verily I must needs say (but I boast not of it) that I see by what means those bonds are to be loosed, and that precious Pearl may by removal of those bolts be taken forth. But yet I profess not my self to be a perfect and absolute Master, and such an one as perfectly knows its preparation, and would make it publick by describing it. No! the Crumbs serves my turn, and the Fragments of the Bread, with which hunger may be allayed as well as with the Bread it self.

I have I confess tasted somewhat of the Crumbs of what pertains to so worthy a Medicament, and with what great Vertues they abound. And such things as my experience have administred unto me I have here purposed to reveal them, for the comfort and sake of my Neighbour, as far as the time and occasion will permit; but yet with this *Salvo*, that I cast not Pearl before Swine, and so incur the Philosophers Curse. To whomsoever the things that I speak shall be more obscure, let him wrestle earnestly by his Prayers to God for light, and refrain from troubling me with multiplicity of entreaties, for I have firmly resolved with my self not to reveal for the time to come more than what I have opened in the present description.

CHAP. II.

Of Gold, and the Comparison betwixt it when living, and when dead.

It is so well known as that nothing can be more known, that Gold being so compact and corporeal and without any opening, doth not when used inwardly to man's Body emit any Vertues at all. I will instance in one Example of Mercury; This being living and unbroken and undissolved, doth not, though used inwardly in a great weight, bring any hurt, but passeth out again as 'twas before taken in without any alteration of the Body. But if it be sublimed with Salt, or shall be dissolved by some other corrosive Water, and be administred to a man to drink the quantity of 1, 2, or 3 Grains it will shrewdly hazard his Life, because the Salts have made its hidden lurking Poyson manifest. Thus stands the case with Gold, which cannot shew forth its hidden force and vertues as long as it remains bound and tied with the fetters of its own compaction, but (on the other hand) displays them, assoon as ever it shall be released from its bonds, be vivified by Salts, and rendred efficacious. You see in a black Coal, whiles it is not fired, there is not any heat at all perceived, but being kindled, and being by the Air rendred living, it discovers the fire and heat being therein hidden, the which you may likewise consider of concerning Gold.

CHAP. III.

Of the Preparation of Gold, and its Dissolution into most tender Atoms apt for vivification and profitable application to Medicinal use.

Gold doth not by any way more easily admit of being turned into most tender and most subtil Attomes than by this following.

Dissolve pure Gold in *Aq. Regia*, and being dissolved pour thereto as much of the Water of Tartar as is sufficient: So the clear Gold, and clothed too with a golden Colour, will precipitate it self to the bottom of the Vessel, nor will it be a darkish Powder, as 'tis wont to be if precipitated by *Lixiviums* or by the Spirit of Urine: But it is light and tender, and shews in brightness like little golden Stars, yea becomes so very tender and subtil, that it swims as 'twere in the Water and settles to the bottom exceeding leasurely, and is thereby so much worthier than all other *Calxes* of Gold how subtil soever they be, that they may be accompted of (if compared with this) but onely as a gross Earth; whereas these shining golden little Stars are made so tender and so subtil, as that they may easily discover and demonstrate their Vertues in medicinal use very notably, by the help of other things, and by being dissolved sundry ways.

CHAP. IV.

By what means this most pure Calx of Gold is to be farther opened, whereby it may be inverted, made volatile, and rendred like to a Vegetable.

This tender *Sol* or *Calx* may be brought to such a pass, without any corrosive in 24 hours space, as that it shall not remain a fixed metalline Body, but become wholly volatile as it was at its beginning. Now this is effected by the help of the Salt of Nature onely, which is to be found every where, and may be gotten by the poor as well as by the rich. Yea so easie as that it is scarce credible, should it be manifested openly and clearly, and which those Brethren of ignorance and proud Court-like Flatterers would entertain with scorn and derision, and accompt the

truth it self to be a lie, as hath been oft times done hitherto. 'Tis better therefore to pass over such things in silence, than by benefitting others to injure ones self. For such Arcana's are to be wrapt up in silence, and not to be cast before such Hogs. But yet to the Adept shall be revealed such things in the end of this writing or treatise, as they have been hitherto ignorant of.

CHAP. V.

Quæry, *Whether or no these most subtil Atoms of Gold are capable of performing any thing in Medicine, and of displaying their hidden Vertues like Vegetables, without any other unlocking of them.*

For answer, I say no. For the Stomach is too weak to dissolve and get thence that efficacy as it doth from Vegetables, though it be thus reduced in a most tender and subtile substance. In vain therefore is it administred to the sick, because it passeth out again with the Excrements so as 'twas taken in, and that without any remarkable efficacy.

CHAP. VI.

Quæry, *Whether or no the Stomach may not be so help'd as that it may be able to dissolve and consume Gold as well as Iron and Copper.*

For answer I say, yes. And forasmuch as the most thin filings of Iron and Copper, being given any one to drink, are digested and consumed by the natural acidity of the Stomach, or are by dissolution there turned into Vitriol, which (said Vitriol) doth vehemently stir up the Body by Vomit, and by Stool (according to the quantity of the exhibited Metals)

and killeth the Worms both in old and young folks, and casteth them forth, and coloureth the very Excrements as black as a Coal; hereby evidently demonstrating, that being dissolved and consumed by the Stomach, it hath brought out, together with it self; the slain Worms; Any body may easily conjecture that the Acidity of the Stomach was sufficiently strong to set upon the two aforesaid Metals, being of a Salt nature, and of an easie Solution, and to reduce them so far as to cause them to display their hidden Vertues. But now the Stomach is not endued with so strong an Acidity, as to be able to set upon and dissolve Gold and Silver, being Metals as 'twere void of Salt, and admitting no Solution there. Hereupon it usually happens, that they being used inwardly in Medicine, do come away with the Excrements in such form as they were administred in. Thence do the unskilfull conclude (but falsly) that there are no Vertues in Gold and Silver, because that being brought into a most subtile Powder, and administred to the sick, they are notwithstanding destitute of any kind of Vertues. The reason why they do not operate at all is, because the Acidity of the Stomach is not sufficient enough to work upon them, and to stir them up to operation. But being dissolved by Acid Spirits, *viz.* the Gold by Spirit of Salt, and the Silver by Spirit of Niter, they doe evidently shew their Vertues in Medicine, being inwardly taken, and do purge the Body no less than Copper and Iron doe, and do withall colour the Excrements black, and kill the Worms both in old and young: Neither indeed will any find a more present remedy for killing the Worms, which do ofttimes destroy many Infants and Children destitute of any kind of help, than the Vitriol of Gold and Silver, about which shall be written a peculiar

Chapter anon.

But forasmuch as the dissolved Metals, but especially Gold and Silver, do by their ungratefull savour offend the Palate, and dye the Tongue and Lips of a black Colour; Men do abhor to use them, although they might be very helpfull in Medicine: But however these discommodities may be prevented, by rendring the said Metals acceptable to the Palate, and so ordering them as that they shall no more Colour the Lips, but evidently shew forth their Vertues, and perform great matters in Medicine. This now may be done divers ways, some whereof shall be here described and declared.

CHAP. VII.

By what means Gold may be brought to such a pass as that (being inwardly made use of in Medicine) it may display its virtues and be stirred up to operation by a guider (or leading Card as 'twere) added thereunto.

Gold being reduced by the way now spoken of into most tender (Atoms, may be stirred up divers ways, so as that being inwardly administred, it may manifest its virtues and that notably and efficaciously.

As first when such Salts are thereunto added as do corroborate the Stomach, and augment its acidity, so as to make it strong enough to work upon the tender Gold and dissolve it, and to turn it into Vitriol in the Stomach, in which case my *Sal Mirabilis* is very excellent, but yet other Salts are not to be despised, to each of which I give the honour due unto them.

Then farther, the same may be done when such Mineral Species are added to the said Golden Calx as

do by their natural propriety expell by Sweat and Urine: For a Mineral Medicine, as soon as ever it begins its operation in the Body, whether by Sweat or by expulsion by Urine, doth also stir up the Gold to operate, so that it works too after the same manner as the Medicament adjoyned to it is wont to operate, just as 'tis usually wont to be in some kind of Fraternity or Consortship; If one begins to sing, to dance, to be enamoured with a Virgin, to brawl, or to play, he presently stirs up others to do the same, who would otherwise have abode still. Now as to the Minerals, amongst the many inciters there, Antimony obtaineth the first place, and doth stir up to operate with himself any such things as are thereunto adjoined, whether they be Gold or Silver, yea though they be dead. And so a Mineral being purgative, or Diuretick, being mixt with Gold, doth perform its operation much more safely and efficaciously than if it were alone and used *per se*, inwardly, without any addition of Gold thereunto. For the tender Gold is stirred up and driven as 'twere to Cooperate together with the operation of the Mineral Medicament, which otherwise, and without such an impulsion and incitement would have remained as dead, and void of any kind of operation, and so passed forth together with the Excrements.

CHAP. VIII.

A better way of making Gold and Silver living and efficacious.

Gold and Silver may be made living and efficacious after another and better way and manner, thus. If they be dissolved in suitable Waters, and made Spiritual, and so used in Medicine, for they are by this means fitted to operate and display their Vertues

after their manner, and according to their preparation.

The manner of making such well opened and unlocked Golden Water, I taught some years since, and published it under the title of *Aurum Potabile*. For I then knew a way of reducing Gold into a white Water by some certain Medicinal Salts, and have it now by me at all times, as being better and far more excellent than that former *Aurum Potabile*, and may supply the place of an Universal Medicine; and that on this account, because it doth operate universally in all curable diseases, and doth withall excell all the other Medicaments that I know of in its wholsome operation, for it doth by little and little expell every obnoxious thing out of the whole body. I confess that the same things are performed by my Golden *Panacæa*, or my Purging Gold, and Diaphoretick Gold, but in some cases I prefer this white *Aurum Potabile* of mine, as I now prepare it, before them, for it hath an invisible and contrary or different operation from my Purging Gold, or Golden *Panacæa*, which do, for the most part, work visibly. And whereas I have formerly divulged those Medicaments in my Treatises, I will omit their superfluous description here, and onely add thus much, That these three Medicaments of mine, *viz.* the Golden *Panacæa*, my Diaphoretick Gold, and my white *Aurum Potabile* are so abundantly sufficient both for the preserving from, and curing of all diseases, that whosoever will onely use them, need not at all any other Medicaments.

But forasmuch as Men are delighted with variety, and that sometimes such or such a coloured Medicine, or such an Odour or Savour is far more acceptable, I have judged it worth while to add for

the sake of the sick yet two or three excellent Medicines more, and such, as to the best of my knowledge, were as yet never divulged. 'Tis at every ones liberty to make use of such an one as best likes him, or now and then to try this Medicine or that, and so to make use of that which best pleaseth him.

The incomparable *Paracelsus*, the Monarch of Philosophers and Physicians, supposed, that these four Minerals, *viz. Sulphur*, *Mercury*, *Antimony*, and *Vitriol*, did prop up the whole Medicinal Art, like so many Capital Pillars, and that by them mought all things be prepared, as were necessarily requisite for any kind of cure. And indeed the thing it self (or the effect) sufficiently proves the truth of this opinion, and so doe those four Minerals themselves too, if they be but dissected, purged, and prepared according to Art, else they are of no worth, but doe more hurt than good, because if they be not duely prepared, they are not deprived of their Venenosity, and are not turned into wholsome Medicines. But as for such as are set to sale in our days in the Apothecaries shops, they are verily but of small moment. For the Antimony which (being turned into Glass) they sell, hath never as yet admitted of any separation of the good from the evil.

And as for *Mercury*, they turn him into a Sublimate, abounding with Venom, and likewise into a red Precipitate, both of which are sufficiently hazardous both in external and internal Medicinal uses; For the vulgar *Mercury* never desisteth from his malice, unless it be exalted by a safer and better preparation. It is sufficient (to say) that being prepared after the aforesaid usual ways, it ought to be wholly shunned, and so it will not create any danger.

As for Common *Sulphur*, although it be exalted into Flores, and those exceeding subtile too, such as are at this day in use, yet shews it no wonderfull matters; for there is not as yet made any separation of the pure part from the impure, neither is it thoroughly opened by Sublimation, or rendered subtile or fit, to operate upon the Body of Man; for as it was taken in, so it passeth out with the Excrements: For the Acidity of the Stomach cannot dissolve it; so far is it from yielding to the Stomach any efficacy, for a strong *Aq. Fortis* cannot dissolve it.

As for *Vitriol*, it yields the Workmen an austere or sowr Oil, and a sharp Spirit, little availing to Medicinal uses, this onely excepted, *viz.* the mixing it with cooling Syrups and Conserves, gives them a gratefull sowrishness; the which Spirit of Salt well rectified, would perform much better. Hence it comes to pass, that these four Minerals, according as they are at this day used, and sold by the Apothecaries, cannot be accounted for the four Pillars of the whole Body of Medicine, and possess that title, which *Paracelsus* exalteth them by, unless they are prepared after another manner than they have hitherto been.

As for *Sulphur*, I bring it to the highest purity by a due washing, and do by suitable and proper Salts turn the same, together with Gold, into a clear water, that so our Nature may assume it to it self, as is to be seen in my *Aurum Potabile*.

I draw from Antimony its purer part, and I implant it in exceedingly well prepared Gold, that it may make the Gold efficacious, witness my Purging Gold.

Instead of the common *Vitriol*, I use the *Vitriol* made of Gold, the which is wont to perform such effects in Medicine as the common *Vitriol* never will,

as shall be taught by and by.

Instead of the common and poysonous *Mercury*, I make use of a *Mercury* prepared out of a good Metal, or artificially extracted by a certain Magnet from the beams of *Sol* and *Lune*, as shall be taught anon. And this *Mercury* is rightly called the Universal *Mercury* of the Philosophers, because being as yet an invisible thing, is extracted out of the Air, and made visible and palpable, and is the effector of wonderfull things in Medicine and Alchymy, as we shall hear anon.

But before I proceed to *Vitriol* and *Mercury*, I count it fit, first to set down a good Medicine prepared out of Silver by the help of Antimony, that so every body may know, that even Gold and Silver (how thick and compact soever they be) may, by the addition of other Medicinal Subjects, be quickned and stirred up, and be brought to such a pass as to emit their Vertues, as we have afore mentioned more at large. The preparation of this Medicine out of Silver and Antimony is as followeth.

CHAP. IX.

The manner of preparing a good Medicament out of Silver and Antimony.

In the first place prepare out of the Mineral or Oar of Antimony an *Acetum* by distillation, according to Art: Then take one part of the best Antimony, and two parts of the Calx of Silver; which being well washed, mix it with the Antimony, by grinding them very well together, that they may be changed into a grayish or somewhat a blackish Powder. Put this Powder into a small Glass, Cucurbit or little Retort, and pour thereupon so much of the Antimonial Vinegar as may serve to bring the said Powder into a

thin Pultis or Pap. Put the Glass in Sand, and distill off the said Vinegar, this pouring on, and drawing off let be so often repeated untill the Antimony shall have lost its blackness, and the Silver its whiteness, and be both of them turned into a red Stone, like to *Cinaber*, which is usually done in the third or fourth Cohobation.

Note well, if such an errour should be committed as that your fire being too strong should when you draw off the *Acetum* melt the mass in the Glass, it would be rendred wholly uncapable of admitting or drinking up the *Acetum*, and then you must of necessity break the Glass and take out the mass and reduce it again into small Powder by grinding, and repeat the operations according to the aforesaid way. This Medicament being turned into a red Stone, and ground upon a Marble into a most subtile Powder, is called by me purging *Lune*, and may be made use of in all Diseases as a kind of *Panacœa*, (like as my purging Gold may be) with great fruit and good success. For this Medicine of Silver doth operate very gently, expelling all evil humours out of all the Members of the whole Body of Man, and this scarce any other Medicine will do save my golden *Panacœa*. For it leaveth no impurity in the Body, (but expels it) not onely by purgation, but also by Sweat and Urine. If you should chance to err and take too big a Dose, it will also cause vomiting, but especially with such as abounding with Choler are prone to Vomit. To Infants under four Weeks old may a Dose be given of about the bigness of a Rape Seed, and be mixt in a spoon with a little of its Mothers Milk, and so given them. It conserves them free from the invasion of the Epilepsie, and frees them. If you find that they are infected with the Small-pox or the like, within a years space, the Dose is to be augmented, and a

fourth or eighth part of a grain may be administred to them, the which will bring out of the Infants all the impurities by Stool, and preserve the Face untouched. Those that are from one to two, or twelve years of age, and being troubled with the Worms, do fall into acute Feavers, (and hereby a great many perish destitute of all help) may have the Dose augmented if need be, and that as their age is, from ½ a grain to two grains, for so the Worms will be killed, and the Feaver sent packing. Nay farther, if the Feavers in Children, be they Boys or Girls, do not proceed from the Worms but from other causes, yet may so much of this Medicine be administred to them as may be requisite to purge and sweat them, and by this means will they be (without any hazard of their lives) restored to their former health. There can scarce be found a more profitable and more present remedy against the Plague and other Feavers in young men, middle aged men, and old men than my golden *Panacæa* or purging Gold, and this same purging *Lune* here described, the Dose is from one grain to five or six grains with reference to the age and Disease. Such a Dyet is to be observed as I have prescribed in the use of my *Panacæa*, *viz.* that the Sick (after the taking of this purging Silver) do abstain from Sleep and all kind of Food for three or four hours at least, and beware of the cold Air, and have an especial regard to keep a good Dyet. This Medicine of mine, together with my *Panacæa Aurea* (or golden universal Medicine) may be safely, and without any fear of danger made use of in the French Pox, Dropsie, Leprosie, Stone, Gout, and other such Diseases, whatever name they are called by; insomuch that men may (next their trust in God) safely confide therein. And besides by this Medicament may very many things be performed in

metalline affairs, the discovering of which we shall at this time omit, contenting our selves with having shewn the things that appertains to the use of Medicine. Furthermore it is likewise notably efficacious in curing of external Wounds and Ulcers, provided it be discreetly administred inwardly, and the external defects of the body be kept sweet and clean. There will in a short time be much more benefit received therefrom, than from such a deal of Ointments and Emplaisters as are frequently used. Praise God and give him thanks for such great benefits.

CHAP. X.

The preparation of the Vitriol of Gold and its use in Medicine.

Dissolve Gold in some acid sulphureous *Sal Mirabilis*, and not alkalizated, *viz.* by the moist way, pass the solution through a Philter, and abstract the unprofitable Phlegm so far untill there appear a thin skin at the top, which appearing, set the remainder in the cold, and you shall get a green Stone like to an Emrald. That part of the Liquor which is not shot, evaporate again even so long till a skin appears, that so you may get the rest of your Vitriol: So all the Gold will together with the *Sal Mirabilis* shoot into a Vitriol, resembling the greenness of Grass, (and so green) as nature never produced the like. In this Smaragdine Table are found written (or engraven) many wonderfull things, which will neither be read nor understood by every body. I will hint some few things concerning it, and such as appertain to Medicine: And in the first place, what kind of Vitriol this ought to be, and what notes and marks it is to be distinguished by, (as thus) a little of it being rubbed

with your thumb, on pure or cleansed Iron, doth guild it of a golden colour, whereas the common Vitriol makes the Iron look of a coppery colour. This is a sign of this golden Vitriol's being prepared after a due manner, which said Vitriol will effect those things in Medicine which I am about to ascribe to it. Besides, it makes Copper and Brass shew of a golden colour and performs wonderfull things with Mercury, if digested with it, in the moist way, but for brevity sake I omit these things. For it grows like a little Tree, and sends forth golden Sprouts.

As touching its Medicinal Virtues such of them as I have found out, are here briefly described; without question there lie hid in it yet more and more excellent Virtues, which as yet are unknown unto me, but will come to light in process of time.

But the chief efficacy and virtue of this golden Vitriol as far as I know, doth consist in purging and bringing out all evil and noxious humours out of the whole body of Man, and withall in corroborating and strengthening him. And as to this office it outstrips all other Medicines whatsoever. Nay more, it performs its operation speedily, yea more speedily than any other purge doth. For as soon as ever it shall be taken into the body it doth presently begin to work, because the Salt is soluble, and therefore such bodies as are not opened, can't at all compare with it, for they must necessarily lie in the Stomach at least half an hour, or a whole hour before they begin their operation. And because every common Vitriol is a capital enemy to all the Worms of the Belly, and the Feavers arising therefrom, wherewith a very many Infants both Boys and Girls do die, void of all kind of help, I do most highly commend this Vitriol of Gold to all such Fathers and Mothers of

Families, whose Children are dear unto them, that they at all times have it in a readiness, to be made use of in cases of necessity. For verily I never found any better or certainer Remedy against the Worms than this very same, because it not onely kills them, but also casts them out, and doth by strengthening the Sick, take away all the Feavers both of old and young. It is also a most great secret in the Plague, in which Disease verily, a longer delay or abiding of a Medicine in the Body (without working) is hurtfull. Besides, it is not onely a certain and safe curative Medicine, but likewise a preservative too in the Plague, and in all acute and contageous Feavers, as well of young as old, the like to which is scarce, yea very rare to be found. For this Vitriol doth speedily and swiftly draw back from the heart every Poison, and every burning heat, and being drawn back from all the Members of the whole Body, doth drive it forth by all the Emunctories of the whole Body, but principally by Stool and Sweat. Furthermore, if the Disease require it, and the Patients strength permit it, it may be administred in a bigger Dose, and then 'twill provoke to Vomit, and powerfully expel Choler. It doth in the *Lues Venerea* shew it self most efficaciously virtuous, and powerfully casts out Tartarous Fluxes and acute humours out of all the whole Body: By which operation it likewise brings much help and comfort to such as are troubled with the Stone and Gout, it removes the Epilepsie both from young and old, and frees the Hydropical of the Water betwixt the Skin. And that I may comprise all as 'twere in one word, 'tis such an universal purge as that it roots out of the whole Body whatsoever is found to be hurtfull and offensive therein. It hath not its fellow as to Remedy the Feavers of Children whether proceeding from Worms or from a corrupted

Stomach, the which kill such abundance of Infants of both Sexes, without any help left. Nor do I think that there can be found a better Remedy in the Plague, and in all other acute Feavers which usually kill Men suddenly, than this Vitriol of Gold, if it be but rightly made use of. The Dose is small, and is easily made pleasant to Childrens Palats, by putting a little Sugar thereunto, or some such like sweet things. To Infants newly born, you may give scarce an eighth part of a grain, against (or to prevent) the Epilepsie, or Convulsions. To such as are from one year old, to 10 or 12 years of age, the Dose may be one, two, or three grains, according as their age is, the which Dose may be augmented in such as are older, according as the age and condition of the Sick requires. Where the Disease is Worms, there the Dose must be so strong as not onely by well purging to kill them, but also to cast them forth when killed. For from those slain Worms, if they abide in the Bowels, other new Worms usually breed. I hope that by my thus revealing this Medicament, I shall so bring it to pass, as that for the time to come, so many Infants both Boys and Girls will not be destroyed by Feavers arising from Worms, but very many will be safely preserved from so immature a death.

But here, some or other may say or at least think within himself, what is the reason that I have such an especial regard to Infants and Children, and am so very solicitous of preserving them from an untimely end. I answer hereunto, that nothing is more necessary than to afford some comfortable due help to Infants, and poor innocent Babes, who do evil to none, and whose loss their Parents do sadly brook. For it is certain and without all kind of doubt, that (amongst Diseases) the Epilepsie or Convulsion is the first that sets upon new born Infants and sweeps

them away. Then presently follows Measels, Small Pox, and such like, and these kill not a few. Then comes the Worms, and they cause Feavers which afflict them with a continual burning, whereby they lose all their Appetite to eating, and covet nothing but drink, and the Parents use no remedy to suppress them, being ignorant that such guests are lodged there, and do not perceive them when the poor sick Babes Bellies do not swell. But further, when by the swelling of their Bellies, they do know that they have the Worms, and though they desire to use some Remedies, yet can they hardly make their little ones to take them as being so averse to them. Nay more, though sometimes they do administer common Worm-feed, or some other Vegetable Powders good against the Worms, yet there's scarce one in ten that is help'd, and the poor sick Children grow worse and worse: And at last when the Disease hath gotten such head as that the Parents see that death is at hand, then is the Physician sent for, who (if he knows the Disease to arise from Worms, and be furnished with a good Medicine) doth presently help the Sick, and free him of the Disease. But if he be destitute of a good Medicine, and attempts to refresh or cherish the Sick with his sweet Syrups, *&c.* he widely erreth, for by such kind of sweet Juices he gives Nutriment to the Worms. Neither doth it at all avail to put Linnen Cloaths, dipped in Rose water, to the Head, thereby to allay its burning heat, and to little purpose are the gentle purging drinks prescribed. For as soon as ever the Worms do perceive any thing given to the Sick, which is contrary to them, they presently hide themselves (or run to holes) and do wreath themselves into a kind of Ring, and pass out with the Excrements. But if they perceive any sweet thing which is pleasant to them to be given to the

Sick, they do receive their nourishment thencefrom and remain alive. And if by some hap or other it doth so chance that one or more is hurried away with the Excrements, yet the rest of them remain unhurt, and the Disease is not taken away, but prevaileth more and more, and at last deprives the Sick of Life. He therefore that endeavoureth after the happy curing of such Feavers as arise by reason of Worms, must of necessity (in defect of this golden Vitriol) give his Patient such things to drink for three or four days as do cause a bitterness in the Stomach. And although bitter things are unpleasant to the Palate of poor Sick Infants, yet are they enemies to the Worms, and do kill them. Such bitter things therefore being drunk for three or four days, the Worms do sometimes in some Sick Children die the first or second day, but in other some 'tis the fourth day e're they die.

Now then as concerning such bitter Medicaments, which I here write of, that they may not be bitter in the Mouth, but be made so in the Stomach, I say, that the Metals are such, and especially Iron, Copper, Gold and Silver, the which being dissolved do obtain a very bitter and ungratefull Savour. But the reason why Gold and Silver being taken into the body, when they are filed and ground most exceeding small, do not operate any thing at all, comes from thence, *viz.* because the Acidity of the Stomach is too weak to set upon them: And therefore 'tis necessary that they be first converted into Vitriols, if you would have them operative in the Stomach, as I have taught you concerning Gold. But forasmuch as every Body cannot be Masters of such a golden or silver Vitriol, it seemed expedient to me to reveal to the poor, a certain and never failing Secret, by the help whereof the Worms both in old People and young are killed.

It is not unknown to Physicians that every common Vitriol wherewith Dyers use to dye their black Colour, doth (being administred to young People) kill the Worms and cast them out too. But because of its unpleasant and odd tast 'tis a hard matter to make Children take it. But now if you do a little more accurately examine the properties of common Vitriol, you will find it to be nothing else but a mere acid Salt, by which Iron or Copper, or both together are dissolved in the Earth, by nature. If now we are so minded, we can also make a Vitriol in the Stomach, which will be equally as operative as that which is made by nature and taken in at the mouth, and 'tis done thus. If we give most small filings of Iron or Copper to little Infants in a due weight, these now may be easily administred unto them, as containing no ungratefull tast. For, being reduced into thin or curious filings, and being a metal easily admitting of Solution, as soon as ever it comes into the Stomach, the Acidity of the Stomach doth meet with it, by which 'tis easily dissolved, and turned into a Vitriol, and so endued with the very same operation as that is, which is prepared in the Earth by Nature.

But you are here to observe the difference that is betwixt the filings of Copper and Iron, and that is this, the Copper works strongly, and the Iron much milder. Besides the Copper makes the Stomach vomit, but the Iron causeth no Vomits, and doth very rarely disturb the Stomach, and when it doth, 'tis onely in this case, *viz.* when 'tis administred in too great a Dose. Therefore amongst all such Medicaments, Iron is the best, the safest, and the least cost, though to proud men it may appear sufficiently vile and base. Nor is it to be questioned but that the brethren of ignorance will entertain it

with derision, and say; if *Glauber* knows no better remedy for the Worms than this, which consists of the gross filings of Iron, he had done a great deal better to have kept it onely to himself: And if Iron abounds with such Vertues there's no reason for him so to praise his pretious Vitriol of Gold with such a deal of commendations. To this I answer, that my aim in teaching the preparation of the Vitriol of Gold is not directed for the Worms in Children so much. But I have added this remedy of Iron to the description I have made of the vertues of the golden Vitriol, to this end, that I may demonstrate it self also is so excellent a remedy against Worms, and for the removal of those Feavers as are caused by them. But because their cure can be more easily perfected (as we just now spake about the filings of Iron) 'tis worth the while to have regard to the way that is most compendious. He that pleaseth may administer of the Vitriol of Gold, but I commend Iron to such as are poor, for they may have that even every where. There is no Village so small but hath a Smith living in it, who can when your necessity requires supply you with some filings of Iron.

But that my mind may be fully understood, I judg it necessary yet more clearly to give you a Declaration of this thing, *viz.* in what manner and with what conveniency the filings of Iron may be administred to the sick Infants. And 'tis thus done. Whilst the Infants are unweaned, some Grains of the said filings from 2, to 6 or 8 Grains, may be mixt with a little Sugar and put into their mouths, and then presently give them suck, that so those filings may be suckt down together with the Milk into the Stomach. Do this three days together and the Worms will be destroyed, and the Feaver vanish. But if any body will make use of any other Vehicle than what is

the Child's ordinary food, he may do so if he please. But as for such as do not suck, but do drink out of a sucking Bottle according as the usual custom is, you may easily give it them, on this wise; Put a little into the Bottle and stop the hole of the Bottle with your finger, and so turn it upside down that the filings may slide down to the hole, and so let the Infant suck it down, and 'twill pass with the drink into the Stomach. To such Boys and Girls as are bigger, and have more understanding, it may be given easily and any way you please, onely telling them that they will be restored to their former health. To such as are 10 or 12 years old a quarter part, or an half of the weight which we usually call Quintlein [from 10 to 20 grains] may be given safely, for 3 or 4 days. But in the mean while let not the meats they use be of hard Concoction, but made of Pottage, Prunes, and such like mollifying and loosening things, which may help forward the operation of the Iron, and so the sick will become the sooner well. I could not refrain from highly commending to all tender Mothers that love their Children, this most safe and not at all costly Medicine against all the Feavers proceeding from Worms, which do kill so many poor little ones destitute of all kind of help. Let no body matter its vileness, but rather think with himself, that God hath also endowed vile and contemptible things with great vertues. Verily this Cure, and thus taking away the Worms, and the Diseases arising therefrom, is strongly founded on natural reasons, or arguments. For seeing that the common Vitriol is a Poyson to Worms, but because of its bitter and nauseous tast 'tis exceeding unpleasant to the Palate, they do very well, that substitute Iron as being void of all Savour, in the room of the common Vitriol, that so being given to their Children it may be converted to Vitriol

in their Stomachs, and so kill and drive out the Worms. I my self have tryed many experiments about the Cure of the Worms in my Children, but never found any thing safer and better than contemptible Iron.

A Story of a Child that had Worms.

I will tell you an instructing Story, concerning a great and eminent man's Child in such a Disease proceeding from the Worms, in which my self was concerned. A certain rich man did on a time consult with me, (or ask my advise) about this Child's Disease. I gave him as much filing of Iron as was sufficient for one Dose, for his Child to drink. It seemed an absurd thing to the good man, to give an Infant filings of Iron, upon this conceit he omitted to use it, and having called two Physicians he shews them the filings, and askt them whether they would advise him to administer it to his Infant. They earnestly disswaded him from using it, saying that if he used it his Child would be killed, and that it was a Medicine onely fit for curing of Horses, and that they would prescribe a far safer and better one. They said there was no danger in the Child of Worms, and therefore they prescribed it a cooling and purging Syrup, thereby to take away the Feaver, and they also added confections of Pearls, with other cooling Waters. Death despised these kind of Potions, and snatcht away the Infant: The Child being dead, there crept out of his mouth great Worms, and clearly testified to the Parents their unseasonable rejecting my advise, haply because the Medicine I prescribed was not costly, but prepared out of a vile Subject. But it repented the Parents too late: The Mother coming afterwards into the House of a certain Neighbour, gave that filings which I had delivered

them, unto an Infant troubled with a Feaver and the Worms, who upon the taking of that one dose onely became better, and by little and little returned to its former state of health, I was willing to set down this history to the end that I might demonstrate, that vile and abject things are many times capable of performing more than Pearls and precious Stones can.

And so I conclude this so very necessary a discourse concerning Worms, and the Feavers arising from them, whereby great multitudes of poor Infants are destroyed. I hope that no body will take it amiss that I have made so long a discourse concerning Worms. For I judged it necessary to shew the cause from whence so many little ones do dye in the flower of their Age. He that refuseth to believe what I say, let him try the thing by his own loss.

CHAP. XI.

Of Mercury and its excellent Vertues, both Medicinal and Chymical, I mean not the common and well known Mercury, but the Mercury of the Philosophers, the which is extracted by the Vulgar and well known Gold and Silver, (but they are to be first rendered Magnetical) out of the Beams of the superiour Sun and Moon, by the help and assistance of the Air.

It is well known to those that have looked over the manifold Writings which are extant at this day, how many and how great searches have been made, and how various and many opinions there have been abroad for many Ages, concerning the Philosophers Mercury; as many men so many minds, one man concludes with himself to prepare it out of such a matter, another out of such a thing, and 'tis hereby

come to such a pass as that, there's no more faith left for any such Mercury, and 'tis lookt on as if there were no such thing in nature, nor is at present any where extant: Because so many thousands of men have been occupied in the search thereof, and so most exceedingly small a number have been masters thereof.

Others have opinionated, that the most pure substance is to be extracted out of Gold and Silver, but not in the form of a running Mercury, but in a watery form, and to be coagulated and fixed by the help of the Fire into a medicinal Stone.

Othersome have perswaded themselves that Gold and Silver being ripe and fixt, are no ways fit for so great a work, but 'tis rather to be sought for in such Subjects as never assumed to themselves any shape, but do as yet lie hidden in that great and universal *Chaos* the Air, because they saw that the life of all things lay hidden in the Air, and that out of it every Creature of God doth daily and without inter mission attract it unto it self after a magnetical manner, both for its own life and augmentation, and that it is so too with the seeds, abundance of them (and they most different sorts too) being sown in the same Earth, do each of them (according as its nature and property is) acquire to it self both life and augmentation hencefrom, *viz.* the Air.

So likewise may it be brought to pass, that even the Metals may according to their nature and propriety extract their encrease out of the Earth or Air, knew we but how to get the true Seed, or true Magnet which might get out that augmentation. For why should not God have as well given a Seed to these his Creatures for their encreasing, as well as to the other Creatures? So then there are very many

sundry Opinions sprung up, concerning the *Mercury* of the Philosophers, and very many men have to their uttermost searched after it, yet but a very few have obtained the same. Though it be thus, yet the fault is not to be imputed either to Nature or Art, but to the searcher after it, because he errs and seeks not in the due place. Verily I did very many years ago exceeding studiously apply my self to the search of such a spiritual and Gold and Silver attracting Magnet, but I could not hitherto attain to the true Scope, until I at length by chance found that a true living and running *Mercury* might, by the benefit of Art, without any Addition of Mercurial things, be extracted out of the fugacious and imperfect Metals, such as are Lead, Tin, Bizmuth, Zink, and Antimony. And although I had read many Philosophers affirming this thing, yet did I always doubt of the same, and indeed not without cause; for in my youthfull days, serving a man of great note in Chymical Labours, I tried in two years space two hundred ways of making the *Mercury* of *Saturn*, and not so much as one of them succeeded. Now my said Master was stirred up to the search of this Saturnine Mercury upon this occasion as follows. He had some familiarity with many noble Personages that were also addicted to the study of Alchimy: One of them knew how to make running Mercury out of Lead, and to turn it into the best Gold, and he sent unto my Master one lot or somewhat better of that said *Mercury*, together with the way of turning it and fixing it into Gold. We set about the work and it succeeded to our desires, and yielded us as much Gold as there was *Mercury* sent us. This hoped for success did so edge on my Master, that he could not rest till he had obtained from him that knew it, the manner of making this Saturnine Spirit. But as often

as ever we tried the operation according to the way prescribed us, both our hopes and labour were in vain. And then my said Master readily granted, that we could not effect it. Hereupon it was that he sought all abroad with the greatest diligence, and had got such abundance of processes and operations, that two years did scarce suffice me to try them all; though there was not so much as one amongst them all that answered our wishes, but all our Labours were in vain. Upon this score, I could believe neither *Basilius* or *Paracelsus* when I read in them, that Gold and Silver might be resolved into true and running *Mercury*; seeing that the bare turning of unripe Lead into *Mercury*, did cost me and others so great Labour and Pains, and yet we could not obtain it neither. Whereupon I fell into this opinion, that the Philosophers pointed at some other thing, by their running *Mercury*: And I did so long adhere to this opinion of mine, untill I chanced to light on the making of a running *Mercury* out of Lead, and I have several times repeated the operation with the same success.

I have likewise revealed it to others, who have also done the same, but onely in small quantities hitherto. But some of them have bestowed much pains about it, and to prepare it in a greater quantity; and that principally, because 'tis certainly manifest that no small benefit lies herein hidden. Nay if it were no otherwise profitable than barely thus, that it may be turned into Gold, and of this I am certain, ('twere worth while.) For if the said *Mercury* be but rubbed upon a piece of Gold, it makes it white, and being then put upon the Coals, it separates indeed from it, but yet leaves it tinged of a higher and deeper Colour. If this Labour be ought repeated, the Gold will become weightier. And hence may easily be

conjectured, that if it were adjoyned to a pure Golden Calx, it would in a short space of time easily pass into good Gold. Neither is there any doubt, but that if any one did but know the manner of rightly handling such a *Mercury*, he would obtain some notable thing out of it, because all the Philosophers do in their Writings promise so much good of *Saturn*. They generally affirm that Lead is (inwardly) far beyond Gold. How many Philosophers are there that reach the preparation of the universal Work from thence? See the Universal Work of *Isaac Holland*, *Paracelsus* his Heaven of Philosophers, The great and small Countryman, *&c.* Many do expresly write, that all things which the Philosophers do seek for, are to be found in Lead; Hereupon they called it Leaprous Gold. And some Philosophers do write, that in *Mercury* are all things that are sought for, haply they mean not the Common, but such an one as is drawn out of Metals. But we'll even let pass this *Mercury* of *Saturn*, and see whether or no we cannot find a better *Mercury*, and such a one as is of greater moment. In the mean time the said *Mercury* of *Saturn* will fly about, and bring good news to the Lovers of Truth, *viz.* that *GLAUBER* is now in the way, to triumph, by the help of God, over all his Enemies.

We will therefore go on to search out, whether or no there is not another and better running *Mercury* than that to be found, which comes out of Lead. When I did somewhat more accurately search into Nature's secrets, I clearly saw, that all things which live and doe in growing take an encrease, do proceed or come forth by the Sun's operation, insomuch that such fruits as are nearer hereunto are the more excellent, and by how much the farther off any are from it, by so much the vilder be they. As for example in Wine; by how much the nearer it is to the

Sun, so much the nobler is it; and by how much the farther it is from it, so much the vilder is it.

The same may be observed in the generation of Metals, *viz.* that in the hotter regions there is a greater quantity of Gold, and of Silver, than in the colder Countries. This is well known, and out of all dispute: So then when I saw that the hot beams of the Sun, together with the cold and refreshing light of the Moon, did not onely ripen Gold, but also those excellent Wines, and the best tasted Fruits, yea and the most contemptible Herbs, and that it gave to all things their most acceptable Savour; well did I conclude, that if a convenient Matrix, or suitable Magnet were exposed to the hot Sun-beams, and to the cold light of the Moon, that might day and night receive their Operations; It could not possibly be, but that the Seeds of those (*viz.* of *Sol* and *Lune*) insinuating themselves into such a Magnet, will pass into most excellent Fruit, and obtain a perfect maturation. I did once make trial to see whether it would be so or no, and having artificially prepared Gold and Silver, opened them, and brought them to a Magnetical attractive vertue; and being well mixed, I exposed them to the *Sun* and *Moon*, to see and try what would proceed thencefrom. Then afterwards, supposing them to have stood long enough at the *Sun* and *Moon*, I put them into a small Glass Retort, and placed it in Sand, and separated (by distillation) all the moisture from the Golden and Silver Magnet, that it had attracted from the Air. I got indeed a sweet Water, but yet not without Vertues. But having administred a stronger fire to this Magnet, I drew therefrom an astringent Liquor, resembling a golden yellow Colour, and like to Gold. I again exposed the said dried Magnet to the beams of the *Sun* and *Moon*, that it might by them be impregnated, and that I

might see whether or no a Second, and more Births would be produced, answering in all respects to the former. I doe not doubt of them, I confess but that they will be of a like property and nature as their Father and Mother are, or indeed be more fair and excellent than they be: For that first-begotten off spring brought with it self into the World a far more excellent fairness than its Father had.

Farther, bringing this Birth of *Sol* and *Lune* to a more accurate trial, that so I might find out its vertues and efficacy, I first of all perceived, that there lay hidden therein (though as yet so Volatile) a Medicine of great moment. And dealing with it upon a certain time, and putting a little of it by chance upon Gold, I found that it made the Gold white; and rubbing the said Liquor many times upon the Gold, it did at length produce (or show forth) the live *Mercury* that lay hidden therein, which said *Mercury* thus living and visible, I extracted out of this same Liquor; but it is better not to vivifie it, but to take it as 'tis born, and so fix it and make it constant. And now, I suppose, that such a *Mercury* as is extracted out of the Air, by Gold and Silver, being not so much corporeal as spiritual, is to be accounted of as the true *Mercury* of the Philosophers.

But if now any will object and say, that this *Mercury* doth not proceed forth from the Air, or that it is not extracted out of the beams of *Sol* or *Lune* by the Magnetick Gold and Silver; such a one may even say what he pleaseth, but in the mean time he will not get the things he fisheth for. Besides, I do not matter it so much, *viz.* whence it ariseth, provided I can obtain the same; If it did proceed out of the Gold and Silver, it were not therefore to be rejected, but it would be altogether better than that which is made

out of gross Lead, nay haply it might become a Tincture, did but any one know how rightly to handle it.

It is a usual Proverb, that *the Apple falls not far from the Tree*, and each thing follows the Seeds of its proper and peculiar nature. *By how much the nobler the Tree is, by so much the more worthy is the Wood thereof. The younger sort sing over the same Song as the old ones doe.* Now these Proverbs do declare, that the Fruits are so much the more excellent, by how much a better nature the Tree is of, and this is a sure rule: And therefore it necessarily follows, that such a *Mercury* as is drawn by Gold and Silver out of the Air, or doth proceed barely from Gold and Silver must needs be far better than that which hath its rise from Lead: And herein I acquiesce. Let every one take from thence what best likes him, I was willing to leave to such as come after me, those things which I met withall of so great moment.

And as concerning the Medicinal Vertues of this Golden *Mercury*, I doe give this caution about it, that if it be used as it came over at first in the distillation in Medicine, because 'tis as yet immature, and but newly born, it may work too strongly upon the Body of Man. It is therefore better that it be fixed with some corporal well-opened Gold, and so 'twill effect those things which a Universal Medicine is onely able to perform. I confess that hitherto I have not brought it to any constancy or fixity, because I have not had time of rightly handling it: In the mean while there are others that will set about this labour, and will in due time manifest more things concerning it. Let every one be content therefore with this present discovery, *viz.* that a truely live and running *Mercury* may be extracted, not onely out of

the soft and volatile Metals, and consequently unripe ones, but also out of the ripe Metals. And seeing that most Men doubt much of the truth of such a thing, I could not omit the affirmation of the same, as being a most true thing: He that listeth may make trial of the same. 'Tis enough for me to have shown you the way. Let others likewise publish something, that so the truth which hath been so long suppress hitherto, may at length spring forth out of the darkness into light.

And now, at last, let's come to treat of Wine, and examine what an harmony and familiarity there is in it with Gold and Man.

CHAP. XII.

Sheweth how great harmony, familiarity, and love, there is in Wine, with Mankind and Gold.

It is evident, even from the Writings of all the Philosophers, that Wine and Gold is a wholsome remedy for Mankind, but yet not in such a gross state, and without any preparation, as they come forth out of the Earth, but they are to be destroyed, and their most pure parts to be extracted, and again conjoyned. To obtain this knack, there have been used many *Menstruums*, and one more excellent than another. The common Spirit of Wine hath no familiarity at all with Gold, because of its unripe and combustible Sulphur, from which Gold is wholly averse, as being its enemy. This thing I have in several places of my Writings made mention of, and have also taught it in this very Treatise, that Gold being dissolved in *Aq. Regia*, and precipitated with the Water of Tartar, yields most curious fine Atoms, which cannot be done any other kind of way. For the common gross Wine, and the common sulphureous

and unripe Tartar are enemies to the Gold, the which is evidently manifest by this preparation of the most subtile Calx of Gold, caused by the pouring of the Water of Tartar thereunto, whereby 'tis precipitated unto the bottom.

The certainty of the truth of this thing may be thus tried, if a little Gold being dissolved in *Aq. Regis* be put into a glass full of Rhenish, or any other sharpish Wine: The Gold will be presently precipitated, by the Tartar which is in the Wine, into a tender and shining Powder, but it will not in a moment of time settle to the bottom, but by little and little. And yet if you put the Wine in a Vessel over a fire of Coals, and boil it, then will it be speedily precipitated. From whence 'tis evidently apparent, that Wine being as yet not at all separated from its impurities, doth as it were differ from Gold, with a deadly hatred, and yet carries hidden in its bowels a substance most friendly to the Gold, the which will, in the end, manifest it self so to be, when the more gross parts are separated from the more subtile.

Basilius teacheth its preparation by a peculiar proper instrument, wherein (as I judge) the Spirit of Wine is to be kindled and burnt, that so by the burning up of the Sulphureity, the Mercurial Salt may be separated and caught in a cold Receiver. And with this very Salt (saith he) may a Tincture be extracted out of Gold, which seems very probable to be so, if one could but get or catch that said Mercurial Salt. Many indeed have attempted this labour, but perhaps not a man hath found an answer to his expectation, where the defect lies, God knows.

Others have mixed Gold with *Alkalies*, and have taught the extracting of a Tincture by an Alkalizated Spirit of Wine, which way, though they may doe

somewhat, yet it is not the genuine way.

Also some have by distillation gotten a certain fiery Spirit out of Tartar, and therewith endeavoured to conquer Gold. Here indeed is an appearance of some kind of possibility, but yet this Spirit is not to be attempted for that, which unlocketh all the bowels of the Gold; and that for this reason, because it doth as yet abound with combustible Sulphur, to which Gold is a bitter enemy. But now if you would duely joyn Gold with Wine, then must all the combustible Sulphur (of the Wine) be first separated from its Mercurial part, and the Mercury of the Wine is to be brought by distillation into a notable fiery Spirit; if this be not done, there will be no great matters effected with it.

CHAP. XIII.

By what means such a Spirit of Wine as doth associate it self to the Gold may be prepared.

Without doubt many such as perceive that there is a possibility of preparing such a Spirit will be most vehemently desirous to know the operation, how 'tis to be done. But it is even a wickedness to cast such a great Secret before the unworthy and impure Swine. It therefore will be sufficient to shew both that it may be done, and after what manner; the rest to be left to God.

But that the studious Artist may not be wholly affrighted or kept back, I will here declare, so much as may be sufficient to any one that is versed in the Labours of the Fire, for the acquisition of so great a Spirit: But yet with this proviso, that he make use of Patience in his operation, for this work is not to be dispatched in a day, like as that labour which in one

days distillation affords a Spirit out of the Lees of Wine, or out of Tartar. No! But the manner of the work is thus:

Take white or red Tartar (for both of them being well mundified, are as good one as the other) dissolve it in Water, and separate all its gross Sulphur by a certain precipitating matter. This impurity abiding in the Water, is to be separated from the precipitated Tartar, by pouring out the Water, the which (Tartar) remains in the bottom like a snowy Sand, and is to be well purged by reiterated washings with Water, so long untill (all the impurities being well separated) the Powder it self becomes like to the white Snow. Now although that this Tartar be most exceeding white, yet doth it contain as yet many Sulphureous Fæces; which being black, do never suffer themselves to be separated by any Solutions and Coagulations, but it is necessary that they be precipitated by a certain precipitating matter. Therefore let that Tartar be again dissolved in pure Water, and be precipitated, the which Solutions and Precipitations let be so often and so long repeated, untill there appear no more black Fæces. This most pure and most acceptable Tartar melteth in the mouth, and doth almost in the manner of other Salts easily admit of Solution in cold water. Being brought to this pass, it is rendred fit to be dealt withall in the following manner.

Dissolve some pounds of this pure Tartar in cold water, so as to make it sufficiently acid. Put this Solution in some warm place, or rather in Horse-dung, or in a warm Balneo, that the Tartar may begin to putrefie and lost its acidity, and get a kind of sweetishness, which before it will come to be, there is required the time of some months. After it

hath thus putrefied, and lost its acidity, all the unprofitable Water is to be evaporated by a Balneum, untill it become a thick and black Juice like Honey; the which being set in the Glass in Sand, and being urged with a stronger fire than was made in the Balneo, will yield a fiery Spirit, and such an one as will mix it self with Gold dissolved in Spirit of Salt, and will separate the purer parts by digestion, and draw them to it self, from the more gross parts, and so will perform its office in Medicine even to most high admiration. For any one may easily conjecture that the most pure parts of Wine, Salt, and Gold will operate no evil effect.

What it will perform in Metalline affairs, I doe not as yet know; But, without question, if it be rightly administred, and duely made use of, it will play its part very notably.

This operation before set down, seems easie to be done, if barely looked on outwardly, but there's more labour and trouble in it than one would imagine. Such as have not the gift of patience, and knows not what belongs to patient working, may forbear this labour. For the putrefaction proceeds on very slowly, and there is required the knowledge of a matter precipitating Tartar, without which it will never suffer it self to be precipitated and purged, 'tis an hard thing to find, but he that knows it, it renders him all his labour facile and easie. Any impure Tartar, whether it be white or red, may be so washed in one or two hours space, and so purged, that (losing nothing save its Fæces) it will become most white, and much more apt for many operations. But my time will not admit of treating farther of these affairs, it may (God willing) be done afterwards in another place.

However, thus much I will yet add more; That if Spirit of Wine brought to the highest purity, so as to retain no filthy savour or odour, be in a due quantity conjoyned by the help of common Water with this excellently well depurated Tartar, there will result from them two a drink of a most excellent savour, like to natural Wine, and may be used instead of wholsome Wine. This would be a most profitable thing for those that travel, had they but that Spirit of Wine, and that so excellently well prepared Tartar. For there is Water to be had in all places, and so they may at all times and every where make themselves good Wine, yea so good and so strong as they please, according as they add more or less of that Spirit and Tartar.

N. B. This Art would be very profitable for the cold Countries, in which Countries, in the want of Spirit of Wine, because no Wine grows there, the Spirit of Corn will perform the same. The chiefest knack is, to be furnished with that Tartar, which by an easie Solution enters into (or is dissolved in) the Water. But this is a business of a greater moment than to be divulged. I have already opened to some the manner of preparing such a Tartar, who make it in plenty, and so any one may easily get from them as much as they shall need.

Besides the use of that kind of Tartar, conduceth to the accomplishing of many other things, but not to be spoken of, lest it should prove a detriment to such as know it. But I doe here truely and sincerely affirm, that whosoever he be that can without wast and cost so prepare the common vulgar Tartar, he will be hereby able to get his food and rayment, and other necessaries for life, wheresoever and in what Country soever he shall abide. This thing will in process of

time have a farther progress, and many will by the benefit thereof live more happily, and perform things incredible. I have made a beginning, and the Mice shall never gnaw off what I have here written, but contrarily my Successors shall enjoy the same to God's glory, even to the Worlds end, and will in the first place thank God, and next him, me, as being the Authour and Revealer of the same. I could reveal many most profitable things that might be done by such a Tartar, were it not for injuring such as get their living by it, and which for certain causes are not at present to be mentioned. I have said enough to Wise men, and as for deriders and mockers, I have said too much, for they will say all are Lies, because they know not how to doe thus.

As to what appertains to the use of this here described Liquor, conjoyned of Gold, Tartar, and Salt, it may serve instead of *Aurum Potabile*, in all Sicknesses, and may be profitably administred, in corroborating the vital Spirits; for it doth not discover its Vertues by a remarkable and visible operation, but it strengthens the Body, and doth very gently drive out Urine and Sweat, and seldom is it that it provokes to stool, unless it be given in a strong Dose. The Dose is from one, two, three, six, nine Drops, even to a Scruple, according as the Sick is, in Water, Wine, or Ale, or other Liquors, in a Morning upon a fasting Stomach, and at Evening after Supper, for some days together. It keeps the Body open, and strengthens the Brain, and all the Members. But principally (before the use of this Liquor) the Body be well purged with good purging Remedies, such as are my purging Gold, and purging *Lune*, because then this Medicine of the said Golden Liquor operates far better, and more profitably. In using it, you are to observe whether or no the

Excrements become black, if not, the Dose is so long to be augmented or continued untill the Excrements that come away be of a black Colour. Moreover, the Disease decreasing, the Dose is to be lessened by little and little, according as necessity or the disease requires.

These things I thought good, at this time, to publish in the Fourth Part of my *Spagyrical Pharmacopœa*. I entreat that every one would take in good part these few Medicinal Secrets, but of very wide and large extent. And, God willing, my Third Century will shortly come abroad and present you with a Manifestation of more excellent Medicines, and other profitable Secrets.

The End of the Fourth Part.

THE FIFTH PART OF THE Spagyrical Dispensatory.

Discoursing of the true Universal Medicine, and of those most Eminent *Arcana's*, as well Universal as Particular, which are hitherto unknown unto the World; by the help of which unheard-of and almost incredible Operations may be effected, not onely in Medicine, but also in Alchymy. Proposed by way of *Question* and *Answer*.

Question 1.

Whether or no it is a thing possible in nature for such a Tincture, or so Universal a Medicament to be prepared, as by the help of which, both the Bodies of Men and Metals may be promoted unto an higher, better, and more noble Degree or Essence?

Answer.

It is not at all to be doubted of, for, as well the Authority of so many and so great Men (who confess by their Writings which they have published that they have made the same) as daily experience demonstrates the same to be a truth, void of any doubt.

Question 2.

If those things which so many illuminated Philosophers have written of this Universal Medicine be true; how comes it to pass, that though almost the whole World search after the same, yet scarce one of so many thousands is master of the same, and that the greatest part of the inquisitors after it, wast their Estates in the search to no purpose?

Answer.

The Art is not to be blamed, because of the fruitless endeavours of so very many men that so greedily gape after so great a treasure; but the fault is to be imputed to their own selves, for they are hereto driven and stirred up by their insatiable covetousness and unjust intentions, to make their search after so divine a gift, and their design is to scrape up to themselves, by the help thereof, great Riches and Honours, little thinking that God always hath and still doth bestow his gifts upon such as are upright and sincere, and who doe not onely daily pray unto him for the same, but do also search after them with uncessant Labours. This the Apostle himself doth witness in express words, saying, *It is not of him that wills, nor of him that runs, but of God that shews mercy*. And yet the extreamly blinded World believes it not, nor proposeth unto it self any other Scope than the scraping together of Gold and

Silver right or wrong, and fain would as it were wrest this so great a treasure out of the hands of God; and having gotten it, add fewel to their malice, pride, and impiety; And so by this means, more nearly approach (even in this life) to the Devil the Father of all wickedness, and be at last plainly like him. And this now is the primary and principal cause, why so very many as are busied about the search of so great a treasure, do lose both their labour and expence.

Question 3.

But are there no other impediments that present themselves, and which may be an hindrance and bar even against pious men too, and such as lead a blameless life before God and Man, whereby they cannot have admission to the knowledge of so great a Medicament?

Answer.

Yes verily, there are exceeding many, or almost innumerable impediments that lie in the way, and shut up the passage even against the approaches of pious men to so great a work, though they attempt the same too with a good intention, and do sue unto God by their daily prayers, and make their search with a most diligent meditation, and continual Labours thereabout.

Question 4.

What are those impediments, I pray?

Answer.

To reckon up all those impediments apart, and to set down each of them so clearly as for every one to understand and apprehend the same, cannot at present be done; neither is it necessary to mention all, for it would not onely amount to a great Volume,

but would also be a burthen to the Reader, and be rather an hindrance than an imitation and encouragement unto him concerning the attainment of the knowledge of so great a work.

But yet that I may satisfie in some sort, the desires of some or other, I will recount some of the chiefest of those impediments, by the knowledge of which, every one may know the reasons that are wont to stave off even pious men from so great a Secret.

N. B. First of all therefore, there are a many that have not means necessary or requisite to begin and perfect the Work withall, though they have a good Judgment, and are inflamed with an ardent desire of searching after nature and its miraculous effects, and doe not at all fear, nor are discouraged at the hard labours that are necessarily requisite to Chymical Operations. Such men therefore as these are (being stirr'd up by a singular candour and sincerity of mind to a love of honesty) doe not thrust themselves forward after the manner of impious and deceitfull Impostors and slanderous Vagrants that thirst after nothing but Gold, and pretend to some greedy Miser, that they will teach him the making of the Philosopher's Stone (the knowledge of which themselves are clearly destitute of.) No! but they even loath such vain acquaintance, and disdain that despicable name of Gold makers, and content themselves rather to set at home, and enjoy those few things which God hath vouchsafed to bestow upon them, than to turn Parasytes, and live in the Courts of Princes and great Men, where they must strive by a Fox-like subtilty to please every one, and to bow the head to each shoulder, and to scrape with his feet. This now is the first impediment, which keeps off not a few good Men from the possession of

so great a Secret.

Besides, there are not a few of this sort, that briefly and cursorily running over the Writings of the Philosophers without any serious meditation upon the thing they read, or without understanding of the same, do think themselves masters of a great deal of Wisedom, and firmly perswade themselves, that if they have a little smatch of Learning, and have but the knowledge of a Tongue or two, and have but by some Anagrams pleasantly tingling in the Ears of some great Men, sooth'd their minds a little, and wip'd them of some of their Silver, the finding out of so great a mystery cannot possibly escape their profound Scholarship, but they must needs catch it. But yet (by their leave) they are quite out, and full well are they known unto God, who with-holds from those proud deriders, and envious contemners of the truth, his benediction, and leaves them wallowing in their courtly pastimes so long, untill at length (after their turning and applying themselves from one foolish deceived man to another, and so on) they doe themselves lay open their own gross ignorance and most filthy shifts, which they have wrapt over with such a detestable babling, and by the fruitlesness of the event shew that their large promises of golden Mountains are most vain and idle. And hereupon their hopes of having the Philosopher's Stone (which they seek for meerly to advance their pride, and the more easily to suppress the truth) vanishing away with the smoak, they lose all their credit and their good report, and can find no more such credulous persons that will suffer themselves to be soothed by their most vain promises. And this is another kind of those that bestow their labour in vain about this so great a work, who doe thereby add a great load to their wickedness, by wasting other mens goods, and

deceiving the too credulous, and ruining others as well as themselves. There are yet a third kind of erroneous searchers, and who deceive themselves with their vain labour, and they are such as being a little too credulous and simple when they have lighted upon some of the Philosophers Writings, and read what vast treasures are to be gotten by Chymical Labours, doe presently feel an itching desire after Gold, and being inflamed with the covetous desire of such hungry treasures, doe apply themselves with unwashen hands (as we may so say) to the reading of the same, and then follow the bare letter in their operations. From whence it comes to pass, that (all things being obscure and dark to them, being ignorant and unskilfull, and the light of nature not shining upon them) they wander from the right path, and immerse themselves in the fruitless attempts of vain Labours. Some there are that have indeed some kind of knowledge of managing the Fire, and who doe very diligently read over the Writings of the Philosophers, but yet are quite confounded by their reading them, seeing that they cannot find out the true Fire, and true matter of the Stone, which the Philosophers have so obscurely and so variously written of. For some of them teach the making of the Stone out of fixt Gold and Silver, and not out of the other immature and volatile Minerals, because what a Man sowes, that he reaps; others tell us the quite contrary, and say that there cannot be any better thing made of fixt Gold and Silver, seeing they are already brought by nature unto that perfection as not to be reduceable into their first matter, out of which (said first matter) they affirm that their Universal Medicine is to be made, and not of fixt Gold and Silver: And therefore rejecting fixt Gold and Silver, they say that the first Entities (of the

said *Sol* and *Lune*) being yet Volatile, are the true first matter of the Philosophers Stone, because they are as yet immature (as they phrase it) and tender, and fit for the making of those things which we are desirous to accomplish, which (they tell us) cannot be possibly made out of those two fixed bodies. And to help forward yet more confusion, the multiplicity and variety of names, which the matter of the Philosophers is stiled, is no mean impediment to the understanding. One bids us seek it in Vitriol, another in *Mercury*, some in *Saturn*, others in *Magnesia*: And thus is that matter deciphered by various and innumerable names, insomuch that it is impossible but that he who is ignorant, and not well versed in these affairs should be hurried into various doubts and perplexities, being clearly ignorant whether or no the Philosophers mean the common Vitriol, or a Vitriol extracted out of the fixed Metals, especially seeing they too and agen affirm, that their Vitriol *Mercury* and *Saturn* are not those vulgar Metals of Gold, Quicksilver, and Lead. Who therefore I pray could be so wise and prudent as to rid himself out of the so many confused and intricate windings of this Labyrinth? Even hence it is that the most learned and diligent searchers have been wound into so many erroneous Labours, nor could by any means get clear of those hedg'd up turnings.

Nay yet more, the inconstancy of such as labour is no small impediment, who (should they have the matter) would not perfect the same by reason of their fickle inconstantness. For if the Stone does not presently come forth, and make them masters of what they desire, away they throw their Books and tread upon them, and load the Authours with curses and imprecations, accusing them of wicked deceit, in that they have not written clear enough for every

one to understand so great an Art at the very first dash, and to become a master of such a notable treasure without any labour at all.

You shall likewise meet with some that are so very wise as that it seems no ways likely unto them, that so divine a gift can be prepared out of so vile abject, and contemptible things, whenas though (by their leave) every good thing (for the most part) is wont to be abject and mean, and not precious, witness *Sandivow*, who tells us that he had declared the whole Work to not a few, even from the beginning to the end, but (by reason of the meanness of the same) they judged it to be but of small moment, believing that no good could possibly proceed thencefrom.

Besides too, it oft times happens that even many of those who by their reading and diligent scrutiny have attained the knowledge of the true matter, are notwithstanding that ignorant of the true Fire that gives Tincture unto that true matter, and therefore cannot be masters of their wishes and desires. Infinite is the number of these and such like obstacles which impead, and retard the desirous searchers after so great a Work. For many there be that seek, but few are they that find.

Question 5.

Whether or no the Philosophers do so much differ amongst each other, as that one hath prepared that Universal Medicament of this matter, and another of that?

Answer.

Yea, verily they seem much to differ amongst themselves, nor onely as to the external Letter, but their Opinions also that concern the very matter it self are very various and discrepant, but yet as to the

Basis and Fundamentals of the truth, there they are of one mind, though one hath prepared his universal Medicament of one matter, and another of another matter, and have each (after the finishing of their Work) described the operation agreeable to their own way of proceeding.

Question 6.

Whether or no there are more universal matters than one, out of which the universal Tincture is prepared?

Answer.

As far forth as we can gather from the Writings, both of the Ancient and Modern Philosophers, they have not onely used divers matters, but also different ways of operation, in the preparing of their Tinctures: But the Tincture being acquired, each had an universal Medicine, and was therewithall content, though (I confess) one Medicine was more virtuous and efficacious than another.

Question 7.

Which of the Metals and Minerals are to be accounted of as the true matter of the Stone?

Answer.

If you should onely mind the literal sence, the Philosophers then seem to know a way of preparing their Tincture, not onely out of all the Metals, but even out of the Minerals too: For they have imposed so many names upon their matter, calling it one while Gold, another while Silver, or *Mars*, or *Saturn*, yea and *Magnesia*, Arsenick, Sulphur, Soot, Urine, Blood, Sperm, *Menstruum*, and I know not how many absurd names, which have seduced the unskilfull Searchers into various errours, whereby they have bestowed their Labours, and spent their Estates upon

unprofitable matters, and so lost both their Pains and Charges.

Question 8.

Whether or not the Tincture may not be extracted as well out of fixt Gold and Silver as out of the other imperfect Metals, and immature and volatile Minerals, seeing that the Philosophers say, that all the Minerals and Metals have their original out of one and the same root, and do agree as to their inward Essence, the difference that is between them consisting onely in the purity or impurity, and in the fixity or volatility of them. If therefore the pure be but separated from the impure, and Shell from the Kernel, that separated purity of the imperfect Metals will give the same that the most pure Gold and Silver will. Nay more, if it were necessary it mought easily be demonstrated, that a true Tincture, and wholsome for both the bodies of Men and Metals, may not onely be prepared out of any Metal and Mineral, but even out of the Vegetables and Animals themselves too, and that by reason of their included Sulphur, which is the Father and Original of all the Metals?

Answer.

But what need is there of seeking that in far remote places, which offers it self nearer at hand? wisely therefore did the Philosophers reject all the Vegetables and Animals, and other the like unprofitable things, as to the making the universal Tincture, they expresly advised us, that such things as you desire to reap, you must sow; and that he that thinks with himself of bestowing his labours about such operation, must begin with those things that nature hath left off at and could not advance to a farther perfection. And what else I pray do Artists seek for but Gold and Silver? if so, then (as the Philosophers do seriously admonish us) we must take

their Seeds and Sow them, if we would Reap a much augmented and exalted Crop of Gold and Silver.

Question 9.

If the case stands thus with these labours, as that those things which are sown, are again reaped in a multiplied encrease, why is not the most noble Seed of Gold onely sown? What need is there of adding Silver thereunto which there's no appearance (as to the outside view) of any colour.

Answer.

Although there be not any apparent colour in the Silver, yet is it certain that there lies abundance of colour therein hidden, which notwithstanding does not dissolve it self before it is unlockt and inverted by the labour and help of the true Chymick Art, and that its external whiteness be hidden, and its internal redness be brought forth to light. For verily a true Tincture necessary for the transmutation of the Metals can never be prepared out of bare simple Gold, without an addition of Silver thereunto: For Silver is the Matrix of Gold, in which, this (as being the masculine Seed) germinates, grows and multiplies its colour.

Question 10.

This seems to every body a wonder that a red colour should also lie hidden in white Silver, seeing that there are not a few who think that even Gold it self does not contain more of colour than it needs for its own self. How therefore must this be understood?

Answer.

As to this, you must not at all mind the external shape, but that which lies occultly hidden. The internal parts of any Seed are not visible to the sight,

as for example. A Vegetable Seed presents you not with the sight of any various colours, but when it is committed to the Earth as to its Matrix, it then sends forth first green Sprouts, then Stalks, then Leaves, after which succeed most curiously painted colours, that at last the Seed comes forth with an incredible augmentation, all which were not visible in the bare Seed.

Consider also the Egg of any Bird, in which no body can discern any Bird, consisting of such divers and various Members, and adorned with such delicate Feathers afore the said Bird is hatcht, the Egg being ripened by an external cherishing heat.

Question 11.

This similitude of the Seed of a Vegetable, and of a Bird, doth not a little enlighten my mind and give me encouragement to believe: I do therefore firmly believe that there is hidden an abundance of colour not onely in yellow Gold, but also in white Silver it self too, insomuch that I do assuredly perswade my self, that a constant and most high Tincture may easily be prepared out of Gold and Silver, and that it is a very difficult matter to prepare a permanent Fire-brooking Tincture out of the imperfect Metals and immature Minerals (though they also hide within their inside bowels most exquisite colours) by reason of that imperfection and unripeness which they lie under.

Answer.

Your judgment and opinion is true. For although, the lesser Metals, as also the Minerals themselves too do hide within their bowels, the most high colours, and though those very colours may easily be separated from their unprofitable bodies, yet notwithstanding there is requisite to such operations

a long space of time, great expence, and hard labour, *viz.* to make such Tinctures constant, permanent, and fixt by the common Fire of Wood and Coals. But yet he that knows the secret Fire of the Philosophers, will easily give unto such Tinctures that constancy in the Fire that is requisite, which otherwise, and by the common Fire, will very difficultly and hardly ever be effected. For example, common water will always remain water, and therefore will never be brought into a stony or metallick nature by the Fire of Wood or Coals. But a thing may be easily reduced unto that which it was before: If an hard Stone be turned into pure water, it may be reduced (even by the help of the common Fire) out of that same Water into a more pure Stone, and so is it likewise with a Metal, if treated with the same operation.

But yet I do not deny but that even any common water, or any Stone may be changed into a Metal, but then I say, it must be done by the help, not of the common Fire, but of the Fire of the Wise Men, by which Fire, even the Waters are wont to be changed into Metals in the Earth: For all Metals and all Stones have their rise out of the Water, and were at first Water. Whosoever therefore doth well and throughly know this secret Fire, which the Philosophers have always with their utmost diligence and care concealed, he may work upon all the first beings of Gold and Silver, as common Sulphur, Mercury, Antimony, Arsenick, Auripigment, Cobolt, and others of that kind, and transmute them into red and white Tinctures. But if he has no knowledge at all of the same, let him in God's name apply himself onely to fixt Gold and Silver, and having volatilized them, turn them into Water, and again turn this same Water into a fixed Stone, which if he brings but to pass, he enters upon the nearest way, and will be a

master of that which he bestows his labour in the search of.

Question 12.

If this be the most compendious way of getting the Philosophers Tincture, viz. *out of those known Metals, as fixt Gold and Silver; Why do some of the Philosophers write that their* Sol *and* Lune *is not that common and well known Gold and Silver, and that as well the Poor as the Rich have that* Sol *and* Lune *as is theirs, and may easily prepare the Tincture it self there out of; so that (it seems) all such as busie themselves in the searching after that most eminent Medicine in the common Gold and Silver, do extreamly err?*

Answer.

These Philosophers that reject the common and well known Gold and Silver, were clearly ignorant of the knowledge of making of the Tincture out of them, which had they but known and well understood, they would not so confidently have affirmed such a thing in their Writings. But forasmuch as they knew but that one way of making the Tincture our of the volatile Minerals, and that that way of making it with fixt Gold and Silver was unknown unto them, they could not mention unto us any other way than their own; whereas though there are not a few of the Philosophers, that on the other hand commend unto us the common Gold and Silver, and reject all the other Metals. Nor is the number too very small, of such as do confess, that the Tincture may be made of the more imperfect Metals, and volatile Minerals, but yet with this caution, that one subject is much easier, speedier, and better to operate upon than another is.

No Man can all at once clearly know and

apprehend every thing, and therefore it would be much; better for a man to judge onely of the things he knows, and not censure the things he is ignorant of, that so the World may not by this means be stuft with so many Writings which thwart one another. Some there are who perswade themselves, that (when they do at long run arrive by many turnings and windings unto the wisht for place) there is no certainer, nor more compendious way than that which they took in making their Journey. Hence it is, that the Writings of the Philosophers are so involved with intricate opinions, out of which no body can well free himself, unless the whole knowledge of nature be opened unto him: But seeing the number of such is very small, therefore it must of necessity follow, that they who err are very many, and that they who become masters of the truth, are but a very few.

Question 13.

What therefore is it that is necessary for us to know, or what things must we be furnished withall, when we apply our minds to the search of so great a secret?

Answer.

Forasmuch as the universal Medicine is the gift of God, and not of Man, it is but just, that the same be sought for at the hands of God, and not of Men, who (in one night and by a Dream) can reveal those things, which a Man will not get all his life long by his reading of the many intricate Books extant; And thus much doth *David* teach us, saying, *In vain do you rise up early, and go to Bed loaden with cares, for God bestows his gifts upon those that love him, even whilst they Sleep*.

Question 14.

By what means may a gift so divine be obtained from God?

Answer.

By daily praying unto him, and by accompanying your Prayers with daily and diligent Labour. For Prayers alone wont serve turn, unless the reading of good Authours, and continued Labour be also adjoyned thereunto. God reveals his good things to mortal Men, by their serious Prayers, and continual Labours.

Question 15.

Are all Men fit to beg so great a gift at God's hands, without any difference at all, or doth so great a secret require onely some particular Men's Supplications, and not admit every one, as if all were fitted thereunto?

Answer.

Verily every body is not fit or worthy to be a master of the same. For should it be granted every one, this so exquisite an Art, and of so great a concernment, would become as common as the baking of Bread, and brewing of Ale, but this is contrary to the command of God, who wills not, that the Goat should have so long a Tail as the Cow, for so in Pride she may smite out her own Eyes. God well knows when, and where to give, and who it is that merits such great favours. But however this is an undoubted truth that the proud shall never obtain any good thing at the hands of God.

Whosoever therefore has a desire after great things, let him throughly search his heart, and see if it be upright and sincere towards God, or no, and it is necessarily expedient for him well to examine himself, (before he sets about the Labours of so great

an *Arcanum*) for this reason, lest it should happen to him, as it did to that ambitious and proud Guest, who (as Christ teacheth) sate himself down in the chiefest place of the Feast, which he was not worthy of, and was afterwards constrained (to his great shame and reproach) to yield the same to a worthier and honester Man than himself.

Question 16.

How must such a Man be qualified, that desires to obtain from God by his Prayers, so great a secret, and by his Labours to bring it to a final end?

Answer.

First of all an *Arcanum* of so great an importance requires a free Man, and such an one as is not bound to any other, nor intangled with any other humane affairs, that so being in a quiet and silent possiture, he may by his daily Prayers sue unto God for his Blessing, and may be at leisure continually to read good Authours, and to let no time slip wherein his Labours are required. Then farther, such a Man must likewise be pious and liberal, and forward in helping of the Poor: he must also be no Tatler, he must have a good and sound mind, and be given to temperance and sobriety. He must not do as the *roving Mountebank* doth, insinuating himself one while into this Man's Acquaintance, another while into that Mans: He must not be over credulous, presently to believe every ones pretension: He must not mind his sole benefit nor be prone to covetousness, and aim at grasping all unto himself. He must not be of an unconstant mind, but expect and wait for (with a patient and constant Resolution) the end of that which his desire inclines him to, and therefore he must not be presently enraged, or be affected with a wearisomness if it should so happen unto him as not

to have every thing presently answering his expectation. He does not propose unto himself the getting of great honours in the World, and of having in his hands power and authority, but rather aims at the honour of God, and the helping and succouring the poor sick and distressed ones. Farther yet, he must be furnished with necessary means, lest he be constrained through the want of Coals, Materials, and other necessaries, to leave off the Work he has begun. But he must especially have God always before his Eyes, and expect the happy event from him alone, and attribute nothing at all to his own peculiar Wisedom, and be daily at his Prayers, and labour without ceasing, and with a patient mind wait on the Lord for a successfull end.

Briefly he that is studious after such a secret, must so lead his life, as to walk unblamably both before God and Man.

Question 17.

Which of these two ways is most safe and most easie for the attainment of this divine gift, that which makes use of the common Gold and Silver, or that which useth the unknown, and as yet volatile Gold of the Philosophers?

Answer.

You must know that both ways are good, and lead you on to your wished end, if they be but rightly and orderly according to Art proceeded withall.

Question 18.

By what means shall an unskilfull beginner, and one who is ignorant of so great an Art, enter upon the right way, and not err, whenas he hath not any one to guide him as it were along by the hand?

Answer.

Who shewed the way unto the other Philosophers that were before us? were not all of them (some few excepted who confess that they learned the Art from good Friends) constrained to learn the same out of the Books of the Ancients, and by the divine Revelation?

Question 19.

Where may a Man find such good and well disposed Friends who will shew the way to him that is unskilfull?

Answer.

Such men are wondrous rare, and indeed good reason have they so to be, and to deal warily and wisely in revealing such notable secrets. It is not engraven on each Man's Forehead, whether he be good or evil; we rarely meet with any example, whereby it hath appeared, that even a Father hath disclosed to his Son so great a secret before his death. Nay more, if Parents have left ought written for their Children at their death; yet hath it been so intricate as that they could not do any good on it without divine Revelation. And upon this very account have divers such desisted from the work, finding that the Writings which their Parents left them were fully as hard to be understood as those written by other Authours, and which were not penned and published for the sake of their Children, but for the sake of all others in general.

Question 20.

What use are such intricate and obscure Writings of? would it not have been better that they had not Written at all? If they had but onely disclosed the true matter, it would have afforded the searching inquirers more light,

and they would have been able more easily to have apprehended the truth?

Answer.

No surely, it would not have been better, if they had passed over so weighty a thing in silence. Whence I pray should we their Successours have known, that there is such an excellent Medicament in nature? The Books they have written do remove from us even every Scruple of doubt, and cause us to believe, that there hath been, is, and may be made such an universal Medicament, if God permits. The reason why they have not jumpt together in disclosing the matter of the Stone with one unanimous consent, is this, because one used this matter, another that, for the making of their universal Tincture, and so each of them have described the way of making the same after his own way. Hence it is, that one hath delivered this manner, but another that hath proceeded another way could not give us the self same accompt of making it just as the other did, but hath hinted unto us onely, the way which he himself used.

The greatest difference is about the matter onely of the Stone; one part of them saith that the common and fixt *Sol* and *Luna* is the matter of the Stone, and lays by or rejects all other Subjects. Another part affirms that a volatile and an unripe Gold is the Master of the same, and that the common *Sol* and *Luna* are to be wholly waved as being unprofitable for the matter of the Stone. Moreover the Philosophers in their description of making the Stone mention a dry way and a moist way, a long way and a short way, a common Fire and a secret Fire, which they used in the ripening of their Tinctures. And now (on this accompt) it could not otherwise be; but that

they should publish such unlike, dubious, and thwarting Writings, which have rendred the way of finding out the truth so difficult and intricate, and have led the Lovers of the Art into such abundance of Errours, and fruitless Labours. The common Fire I wish, is destitute of the power of ripening volatile Gold, and reducing it into a Tincture, which that secret Fire, continually burning with its flame in the glass upon the matter of the Stone, is able to effect. Now besides the common Fire, there must necessarily be the assistance of the moist Fire, which being kindled by the Fire of Coals and made efficacious, doth radically conjoin the fixt Gold and Silver, brings them unto a volatility, and makes them again constant in the Fire. This way (in my judgment) is the shortest, easiest and safest of all; for it makes the fixt *Sol* and *Luna* spiritual and volatile in three days time, and turns them into the *Mercury* of the Philosophers, which white *Mercury* of the Philosophers doth afterwards pass in one days space, into the black Lead of the wise men, if a small Fire be administred thereunto. This Lead being put into its requisite glass, may (by the help of common Fire) be reduced (after its changing of Colours) into a constant Tincture.

And now though the ripe and fixt Gold cost and be far dearer than the immature *Sol* is, yet that's no matter, for there needs not a pound of Gold to be used about the compleating of this work, but half a pound onely, or else but two or three ounces, that so the operation may be the sooner ended. Nor will he that shall once have brought one half Ounce unto a due perfection, need such a deal of Gold, for he wants not Gold any more, wherewith to begin the operation a new. And although on the other hand the maturation of the immature Gold by the secret Fire

doth not require so much expence as the common Gold doth, yet it requires more time for its perfection. Besides too, the moist way is always subject to more Casualty and Hazard, and requires a much longer time to bring it to the desired perfection. It is therefore at every man's pleasure, to choose which of these two ways pleaseth him, onely he must proceed warily and prudently. And if he should chance to commit some Errour once or twice, yet will not such Errours be of any great detriment unto him, if he can but at last arrive unto the wisht for end, and reap the multiplied and manifold Fruits of his Crop. Thus much was I willing (and indeed ought) to communicate of my opinion (concerning the universal Medicine) unto the Disciples of *Hermes*, but yet without prescribing (or obtruding my thoughts) upon any one, but leaving every one to his own Conceptions.

Mean while I would advise every one not to attempt a thing of so great a moment, rashly and inconsiderately, but in the first place accurately to weigh all things in his mind, as to what may be done, and what may not, lest he repent him at last and be quite tired with his fruitless Labours. For it is no mean slight business to prepare the true Tincture of the Philosophers, neither is it given unto every man to have the knowledge and possession of so great a Work.

Question 21.

Would it not be a very convenient thing for two or three Friends to joyn their hands together, and help each other by their mutual Labour and Expences, and so ease that trouble which otherwise one alone must undergo? Or if any one be so minded as to attempt the work alone, would it not be better for him to get him some faithfull

and diligent Operatour, whose help he might make use of, in the promoting and forwarding of his Operations.

Answer.

For my part, I would not advise any one to do thus. For when a work of so great a moment is to be undertaken, and to be accomplished by the common mutual Expence and Labour of others, the Affairs are then obnoxious to no small hazard, and for the most part come short of the hop'd for event, by reason of the most different Opinions amongst men, concerning which the Comœdian said very right, so many heads so many opinions, every one hath a peculiar fancy.

Now then, from one desiring this thing another that, there can't arise ought else but confused actions and operations, which are so far from forwarding the work, as that they retard and obstruct the same. Many Work-men disagreeing amongst themselves, can never build an House agreeable to the right dimensions of building. And therefore it is far better for every one to apply himself single and alone to the performing of so great a work, and quietly to attend upon the same, and invoke God's help alone, and leave off his expectations from man, amongst whom fidelity and love, are like the rare Bird in the Earth, and as scarce as a black Swan! Nay even the friendship of brethren is wondrous rare, and (which is worst of all) the bond of friendship is too often broken asunder betwixt Parents and Children. The golden Alphabet doth likewise in its beginning teach us the very same, saying, trust in God onely, and in him place thy hope, give not any credit to the promises of man, God onely is faithfull, fidelity is banished out of the World.

'Tis sufficiently evident, what kind of doings there

is in the Courts of great men, you'l there find 2, 3, 4, or more Chymical Operatours busily imployed about making the Philosophers Stone, for they seek after nothing less, but yet by reason of their ignorance, they effect but very little or nothing at all, for the main thing that they mind is to strut it bravely out in their Silks and gay Apparel, and to have their Tables furnished with plenty of various Dishes, and generous Wines and Drinks, whereby they may stuff their Bellies; and this is clearly testified by daily experience: and as for taking to ones self an Operatour, that is more hazardous than the other, where the work is attempted by a confederacy, at their common mutual Expences and Labour. For seeing you cannot make an inspection into any man's heart, whereby to know what Monster he there cherisheth, and what good or evil he has hidden in the inside of his heart, you cannot possibly promise your self any certainty of his taciturnity or fidelity, and therefore plainly ignorant must you needs be whether the man you would take to assist you be faithfull and no tatler. Verily even the common Labour cannot be committed to such men without hurt and damage, but great Arcana's cannot be left to their care without assured loss of all. 'Tis wondrous rare to find a Servant so faithfull, who (after he hath slily gotten the knowledge of one or two Secrets though but trifling ones too) does not presently perswade himself, that now he's a skilfull Artist enough, and no longer needs the instructions and manuductions of any other. These kind of perverse men being by thus (evilly perswading themselves) seduced, are presently wont secretly to withdraw themselves, or if haply they do stay yet longer with their Master, they behave themselves so malepertly and unmannerly, as that they spoil the things

committed to their Charge merely to accomplish this end that their Master may dismiss them. If therefore you will not wink at and suffer them to spoil and destroy, by their saucy regardless Labours the things they have under their hands, but are constrained to put away these most ungratefull and plainly unmindfull men of the benefits they have received, yet will they not acquiesce here with an honest dismission and parting, but will every where gnaw and wound thy good name by abundance of reproachfull Stories, as being now thus opiniated that they far excel you, their Master in Wisdom, Skill and Knowledge. But yet I except in this place those Servants that are honest, pious and diligent, and that love vertue, and make a conscience of their ways. For the Devil has not got the possession of all men's hearts, for there are some Chymical Operatours to be found who are so faithfull unto their Masters, as that could they of a farthing make a Florin for their Masters, they would most cheerfully do it. But yet these men are so very rare, that scarce one in ten can be found that you may give credit to, and trust. And my own thirty years experience hath taught me, and therefore I tell you no more than what my self have to my own detriment experienced. Read but what *Paracelsus* hath written of these perfidious Knaves, amongst other things he confesseth, that thirteen of his Servants came under the Hangman's lash, and that of them all he found but one faithfull, (and that was *Operinus*) and yet he (after *Paracelsus* his death) did manifestly enough bewray his dissimulation and unfaithfulness; for he did not onely load him with reproaches, but also published slanderous Writings of him. This is the thankfulness the World is wont to repay for the good that is done it, shun therefore such as these the most you can, for they neither

fearing God nor reverencing men, make no matter at all of either opposing the most apparent truths, or of defending it by most manifest and evident Lies. And although the malicious wickedness of a man, be not presently known, yet notwithstanding it bewrays it self by the slanderous reproachfull lies, with which it requites the good turns done him by his Neighbour.

Thus much I judg'd worth while to communicate to all the Disciples of the Hermetick Art, that so they may learn to beware of these kind of Harpies.

Question 22.

Seeing it is not good to enter into friendship or consortship with others, in order to the attempting so great a work: And seeing a man runs a greater hazard in taking to himself an unknown Operatour, haply it would be the best way to seek after some particular Medicament which may be serviceable for the benefit of both high and low, and which may not onely prove helpfull unto the poor, but also by which a necessary Sustenance may be found even amongst the rich, and so by this means may a man lead a quiet life.

Answer.

This advice or determination I confess seems far better and more safe than the two former, but even this too needs a provident wariness, *viz.* if a man should haply (by his sedulous search) acquire the knowledge of some eminent and excellent Medicaments, he must take heed lest by presently making every one partaker of the same, he pulls damage on his own head. For 'tis an usual custom amongst wicked men to endeavour (assoon as they find any one gifted by God with such a blessing) to get it our of the breast of the Possessour of the same, by most cunning Subtilties, and promise even golden

Mountains, and such as they are never able to perform. And if once thou let'st the Art pass but out of thy hands and come within the Clutches of other men, thou may'st well fear in the first place lest it should be made publick, and so thy self be deprived of the benefit of the same, though they whom thou hast trusted with the same have bound their credit with the firmest obligations imaginable, and this now is to be understood of such men from whom such bonds as they call them may be demanded. But as for the great ones that are wont to give onely their words (and stand upon that) when they have got any *Arcanum*, they are wont to deliver it to their Chymical Operatours to make, for themselves are partly ignorant of Chymical Operations, and partly let not their own hands to work; if their Operatours be skilfull in Chymical Operations and bring the same to the expected end, you shall be presented with some small reward, and even of this too will he (whose charge the presenting of it is committed unto) keep to himself the better half. This now is done unwittingly to their Masters, and who dares inform them of such deceitfull Servants, and purchase to himself the envy and hatred of the Courtiers? And so those who are commanded to bring thee good sweet Milk, do themselves first take away the sweet fat Cream, and then bring thee the sour Whey. But if for the more surety, thou sendest any Servant that may be there at the perfecting of the Operations, he will (if faithfull satisfie thee; if not, he will present thee with as much of the reward as himself pleaseth. Thus hath it hapned unto me, for 'mongst other Servants I have had such, that in their Cups have impudently boasted of such kind of theft, and have prevented me of a present or two that belonged unto me, and have made themselves merry

therewithall.

These and other such like inconvencies are wont to happen upon the revealing of *Arcanums*, though they should fully answer the expectation of those whom they are revealed unto. But if it should happen that those Chymical Operatours should by reason of their ignorance commit some Errour in their Labour, or should have no mind to the work as being a little more troublesome than ordinary, fearing lest the Sparks of the Coals should light upon their Silken Garments, and that their hands should be defiled with the blackness of the Coals, they presently perswade their Lords, that the *Arcanum* which was thus revealed is false, and that you are a cheat and a mere vapour, and so they do not onely rob thee of thy good name, but do likewise by their fraudulent and lying tricks deceive their Masters affirming those things to be false, which notwithstanding are most certainly true. Several Letters I have by me, written unto me from such Court Operatours, in which they confess that they have wrought up (or made) those *Arcanums* (which were sent them) not without good Success, and that therefore they would desire yet greater ones than those: but yet they have afterwards spread obroad a false report, and said that they never could receive any benefit by them at all. And that fruit or reward which was due unto me for my discovery, themselves intercepted, some got them fat Offices, others were gifted with Nobility and Money. And so indeed is it an usual thing for those that dress the Vines, and press the Grapes and make the Wine, to be (by a forc't put) content with the Husks, whilst the idle and such as work not, drink up the Wine. Far better is it therefore, for every one to press out his own Grapes. By this means will a man know what is his, what he has, and what he does, whereby he may

use his own things as best likes him. Now then well may the man that knows many Secrets be deterred by the so many and such adverse Chances, from making others partakers also of the same, and well may he esteem it much better to enjoy the few things God hath bestowed on him, with a quiet mind, than to expect many things (but with a great deal of danger) from others.

And thus much shall suffice to have been premised by way of *Questions* and *Answers*. Now follows the use of some eminent *Arcanums* and incomparable Medicaments, which have been mentioned in the Books I last published, one of which treats of occult Fires, and the other contains three Dialogues.

Of the Lyon, or of the Bloud of the Lyon, or Gold, how it is to be prepared, and to be most profitably used as well in Medicine as in other Arts.

As concerning the way of preparing this Bloud of Gold, it is already described in the first Dialogue, and its adjoyned Corollary, insomuch that there needs no fuller declaration in this place. But yet you are to know that I have met with (since the writing the first Dialogue) a far easier and more compendious way of converting or turning any Gold, even in a moment, into Bloud, by the help of our occult *Sal Armoniack*. But this Bloud is not to be used in Medicine, as it is *per se*, because of the *Sal Armoniack*, which transmutes the Gold and changeth it into Bloud. For these sharp Saline and Corrosive Spirits are unprofitable, and hurtfull in Medicine, and are therefore to be separated from the Gold, which is done by the pouring on of common Water or Rain water, which imbibes the Spirits of the Salts, and

precipitates the most red Powder of the Gold to the bottom of the Vessel. This Powder must be well wash't by several waters, and be well freed from all its saltishness; which being so freed, may (by the addition of some Cordial Water) be reduced to the consistence of a Syrup, and so kept; the Dose whereof may be augmented or diminished according to the condition of the sick, and the disease. But commonly so much of this Golden Bloud is sufficient as serves to tinge a spoonfull of Wine, Ale, or other Vehicle, with a red Colour. It is usefull in all diseases in which the Heart needs strengthening. But especially it allays the immoderate Flux of Bloud both in Men and Women, and cures the Gonorrhea, Leprosie, and French Pox, if the Body shall be purged with due Purging and Sudorifick Medicaments. It heals those Pustules in the Skin, the Nose, and other places of the Face if outwardly anointed with a Feather several times a day. For it drys vehemently, and makes the Skin it self fair and smooth. And therefore upon this account it is exceeding profitable for Women that have naturally pale Faces and Lips, for being laid on, it changeth the paleness into a comely and natural Colour, especially if a little white Oil made of Talk be thereto admixed, to temper and allay that most red Colour of the Gold, and it likewise is a most delicate Fucus for such Women whose Faces are not onely pale, but also dyed with a duskyish or yellow Colour, and by means of this Cosmetick or Fucus may they paint their Faces of a natural Colour. For no Fucus may compare with this, for it is so commodious and durable that it cannot be distinguished or known, nor be corrupted as others are, which being done with Vinegar, sowre Wine, Lemon-juyce and such like things do presently, by a breathing on them, turn into a filthy Colour, and

bewray a painted Face. For this Golden Bloud is so very constant, and doth so keep its most curious Colour, as that it remains safe from all injury of the Elements.

Furthermore, this Bloud (before it is freed from its Saline Spirits) tingeth the Hair, Skin, Wool, Bones of Beasts, and Feathers of Birds, with a most delicate purple Colour; which passing into a redness, is so constant, as that no sharp Waters can corrupt it, and therefore it is far beyond all other purple Colours, what name soever called by, and worthily may it be accounted for a kingly Colour.

It would be too long to reckon up in this place its various other uses: It serves in Medicine for the tinging of divers Confections and Cordial Waters, which Colour is much nobler, and more profitable than those wherewith Confectio Alkermes and Cordial Waters are wont to be tinged. 'Tis evident that the Colour of Gold doth rather benefit than hurt the Sick, which if the said Confections or Cordial Waters are coloured withall, they become the fairer, and they are rendred yet more delicate, if the Atoms of Gold, being thereunto adjoyned, fly about in the Wine or Water like so many very small Stars. For if to an *Aq. Vitæ*, which is already tinged with the Bloud of Gold, a little of the said Atoms be admixt, they will shine out of that delicate purple Colour, like the most bright *Aurora* (or day-break) in the Heavens. This is a most excellent way of making *Aq. Vitæ's*, for the Atoms of the Gold are so very subtile, as that they easily admit of concoction and digestion by the heat of the Stomach, and emit their Virtues, which those common Gold leaves which are mixt with *Confectio Alkermes*, *Aq. Vitæ*, and such like compositions onely for ornaments sake, doe not doe:

And therefore they are no ways comparable to those Atoms of ours. 'Tis no small trivial matter that I disclose unto you, and verily it would be well worth the while for the Apothecaries shops of noble men to esteem highly of the same: And as for what and how great things may farther be done with this same Tincture of Gold, as to the Metallick matter, may be found in the first Dialogue.

An easie way of making and preparing the Atoms of Gold.

Dissolve an Ounce and an half of Gold in strong Spirit of Salt, or if you are not furnished with this Spirit, then dissolve the same in common *Aq. Reg.* and pour upon the Solution one pound or two of Rain water, whereto is admixt about one pound of Rhenish Wine, mix them altogether in a glass, and shake them well, and shut the glass close that no dust fall therein, set it by for some days in a warm place that so the Gold may precipitate out of the Water, and settle to the bottom of the Vessel in the likeness of most curious small Stars. But if all the Gold shall not be precipitated in this time, set then the Glass in a B, and let the Solution boil a while; then when it is again cool, set by the Vessel some-where that the Gold may settle, which being dissolved into Atoms, (and the Water and Wine poured neatly off) is to be taken out of the Glass, and to be often wash't with pure water: So shall you have the Atoms of Gold, which you may safely make use of in Medicine.

N. B. But you are to note, that it is impossible for the Gold to be by thus proceeding so dissolved as for nothing at all thereof to remain in the dissolving water. And therefore 'tis necessary that you separate the residue of the Gold out of the water by

precipitation. And in my other Writings will you meet with several ways of separating the same. These most fine and subtile Atoms of Gold may you also make use of with most notable profit even in other Chymical operations, concerning which you will find clear instructions in other places of my Writings.

And forasmuch as I here make mention of a most excellent *Aq. Vitæ*, it seems in my Judgment necessary and profitable to add here a full description of the same, together with the use thereof.

The way of making a Golden Aq. Vitæ*, and such as never as yet hath been described and published unto us by any Physician.*

Take of the best and purest Salt-petre, and of white and pure Tartar, each one pound, of yellow Sulphur half a pound, make these matters into Powder, and having well mixt them, put them into a Crusible, and by putting thereunto a live Wood coal, kindle them, that they may take fire and burn up; and leave a yellow mass behind in the Crusible; which being molten in the fire, and turned forth into a Mortar, will give you a fiery sulphureous Stone, biting the tongue by reason of its sharpness. Now whilst it is yet warm, powder it, for it presently attracts (when cool) humidity out of the Air, and admits not of pulverization. Being powdered, pour thereupon two or three pounds of the best Spirit of Wine, and set it by in a cold place for some days, but with this proviso, that you daily shake or stir your matter in the Vessel with the Spirit of Wine: By this means will the Spirit of Wine attract a red Tincture out of the Sulphur, and will withall acuate it self with the Salt,

by the Calcined Tartar, then filter this Spirit of Wine by Cap-paper or a Filter, as they call it, and draw off two third parts by distillation in a B, that so you may have your Spirit again, but of a very pleasing tast and smell, which it gets out of the Sulphur, as out of the Center of all odour.

This Spirit of Wine, having the following Spices and Flowers steeped therein, and being again distilled off in a B, will give thee an efficacious Cordial Spirit of Wine, which said Spirit you may colour red, with the Tincture of the Gold, and by the apposition of as much of the Atoms of the Gold as is sufficient, make it Aureous. Now as much as there shall be in quantity of this same Spirit, you may thereto afterwards add so much sweet volatile Spirit of Gold, as will allay the overmuch heat of the said Vinous Spirit. But that this yet overmuch heat may be yet more allayed, and that the strong odour it self of the Aureous Spirit may be corrected, you may therein dissolve about some four ounces of Sugar-candy beaten into fine Powder, and this will make this truely Aureous *Aq. Vitæ* most sweet. This most incomparable *Aq. Vitæ* may be used in all the Sicknesses of the Body most safely and most profitably where the Vital Spirits the Heart and Brain need strengthening. For the Aromatical Spirit of Wine doth even *per se* corroborate the Vital Spirits, and now the Spirit of Gold makes it more potent and effectual, and the Atoms of the Gold too, doth render it yet more vertuous, insomuch that this *Aq. Vitæ* bears away the Bell from all others, nor can a better and more powerfull be prepared. For not onely the red Tincture of the Gold, but likewise even the Gold it self being thus turned into Atoms, is constrained to undergo the concoction and digestion of the Stomach of Mankind: And therefore where 'tis used, the

Excrements are generally black, which could not be if the Gold past forth again undigested. Seeing therefore it is an undoubted truth, that it is thus overcome and subdued by the Stomach's digestion, it cannot be but that by its most wholsome operation it must needs prove helpfull to the sick body. Besides too, I think it not amiss to tell you, that the very Excrements (save your presence) of those sick Patients that daily make use of this *Aq. Vitæ*, are not to be thrown away, for they will even yet afford some small benefit, if they are laid to the roots of Vines to dung them with, for it will make the Vines produce such Grapes as have their Stones speckled with little Golden Stars, as my self have tried. And perhaps something of greater moment may be effected in the Metallick trade by such kind of Excrements, though I confess 'tis needless, seeing good may be done upon them by other ways.

The Spices and Flowers which are to be extracted by the aforesaid Alcolizated Spirit of Wine, and to be used in the Aqua Vitæ.

Take the Flowers of the Lilly of the Valley three ounces, Of Red Roses, Cinamon, Mace, Cardamoms, Borage, Rosemary, Sage, Lavender, two ounces, of Ambergrease, Musk, a scruple. All these Flowers fresh gathered are to be put, with the dry Spices, into the Spirit of Wine, and are to be therein macerated, and then distilled. If you can't get fresh Flowers, you must even content your self with dried ones, but yet the fresh-gathered are better if they can be had.

The Use of the Universal Medicament described in my second Dialogue.

The vertue and efficacy of this Medicament is of such

a large extent, as cannot be comprehended nor apprehended by humane understanding. It is prepared of the immature, and as yet volatile, and not fire-brooking Mineral, called by the Philosophers the *Magnesia* of *Saturn*.

When this black Mineral is purged from all gross impurity, and reduced into a most white and delicate Colour, and is in the form of a most delicate, fine, bright, and very ponderous Powder, it may be used with notable benefit about the curing of the most grievous diseases. It casts forth out of the Body of Man all hurtfull things, and that both by a visible and invisible operation, freeing and purging it of all hurtfull and ill humours, beyond all other Medicaments, what name soever distinguish't by. It shews incredible Vertues in a very little Dose, insomuch that there hath not been found hitherto any Medicament, which being exhibited in so small a quantity, hath shown such incredible efficacy. And although Antimonial Medicines are notably vertuous, and cause every one to wonder at them, as appears by my Golden *Panacœa*, and my *Panacœa* of Antimony, which for this twenty years space have been famous all over Europe, yet can they not be in any case compared to this Universal Medicament.

1. For first of all, they are far inferiour in virtues to this, for one grain of this will do more than two, three, or four grains of the other can effect.

2. Secondly, this is heavier and more ponderous than the others, for one ounce of this will lie in less room than three, four, or five times as much of my Antimonial, or of my golden *Panacœa*, and therefore is it much easier and more commodious to be taken by the Sick.

3. Thirdly, this is also to be preferred before the others if you consider them as to tast and smell, for this hath neither odour nor tast, whereas that Antimonial and the golden *Panacœa* have always some odour and tast of the Salts, and for that reason do breed a nauseate and loathing in the Sick if often used.

Therefore I have determined with my self to substitute this universal Medicament, in the room of my *Panacœa* made of Antimony, and the rather for this reason, because Deceivers and Cheaters have made a red Powder of Antimony, and perfidiously sold the same for my *Panacœa*; but now this deceit of theirs must end, for they will never be able by all their deceitfull imitations to counterfeit this ponderous Medicament void both of smell and tast.

As for the Dose of this Medicament, there must care be had that scarce one quarter part so much of it, be administred as is wont to be of my *Panacœa* of Antimony. There must scarce be given the tenth or twelfth part of one grain at one time, to such Infants as are under six Months old, and which are afflicted with the Epilepsie or Convulsions, the Small Pox or Measels, the Feavers or such like Diseases. To such as are upwards of six Months, even to 12, 13, or 14 Months old, an 8th. 6th. or 4th. part of a grain may be administred, to such as are 2, 3, 6, 8, or 10 Years old, ¼ or ⅓ part of a grain may be given. To such as are upwards of 10, even to 20 years old, ½ a grain, or ¾ or at utmost but 1 whole grain may be administred. Those that are between the 20th. or 50th. Years of their age, may use 1 grain or 1 gr. and ½, nor must they exceed 2 grains at most. From the 50th year, all the rest of their age even to their lives end, the Dose of this universal Medicament is to be

again lessened, for old age is not able to brook so much as youth, and as a Man in the prime of his years can. But however you may administer this so notable an universal Medicament to every age, pleasantly, safely, and without any danger at all, if a due Dose be but observed: Insomuch that you need not fear to administer the same even to Women with Child. But yet the lesser half part of the Dose which other Men use is enough for them. In Feavers it must be given afore the Fit, in the Plague as soon as it's felt and afterwards too, in the Dropsie once (or if that one Dose be not sufficient) twice every month; in the Gout and Stone twice a Week; in the Leprosie, French Pox, and such like Diseases as arise from the impurity of the Bloud, thrice a Week, in obstructions of the Milt, Liver, Mesentery, once a Week; in the Epilepsie, Madness, and other preternatural affects of the Head, let it be given twice a Week, and this so long till the evil be quite removed. The affects of the Chollick will need a Dose every day before they cease. This is the manner of curing the aforesaid Diseases of the Body and all others, by the help of this universal Medicament. Which being used inwardly performs things incredible, and doth likewise work admirably in all dangerous wounds, open or running Sores, as well old as new, the Cancer, Fistula, and the like.

Being inwardly taken once in eight days it consumes all untoward Salt Humours, and hinders them from running to the Wounds or Sores, and making them by that means worse and more dangerous. But yet you must likewise apply externally excellent Balsams and Emplaisters, such as are mentioned in my third Century, that so the Wounds and Ulcers being duely purged, may admit of help by the applied Remedies and be the more

easily cured.

This also is to be considered in the using of this Medicament, the Sick is to lie in his Bed four or five hours at least after he hath taken it, nor must he either eat or drink all that time, and he must abide all that day in Bed, or at least in his Chamber, for the avoiding of the Air, nor must he sleep afore the Medicament hath finisht its operation.

The Vehicles which it is to be mixt with, and to be taken in, are Wine, Ale, the warm Broath of Flesh, Syrups, Conserves of Roses, fresh Butter, roasted Apples, and such like. Neither is it amiss to make a light Supper, and feed upon easily digestable Food, and which may make the Stomach more apt and fit for purging, the night afore you are to take the Medicine the next morning: And those are Prunes, Raysons, and other such like Food, as by their laxative property make the tough and viscous humours slippery and softer; when the operation is over, the sick Patient is to avoid hard meats and strong drinks, nor must he presently stuff his Stomach therewithall, but rather use much temperance the next day after his purgation, and feed onely upon the Broaths of Herbs, as Chervil, Fennel, Spinach, and the like, whereby the Medicament may operate the more easily, but it will yet more readily perform its operation, if just at your administring it you add a Drachm of pure white powdered Tartar, and boil it with a Drachm of Sugar, or (which is better) some Manna, in some pure clean Water, and so drink it warm, which said potion following after your Medicament first taken, is wont well to purge and cleanse the Stomach and Intestines.

And this is the use of our Mineral Medicament,

which if you do but accurately regard, there will no errour be committed, and the said Medicament will (by its laudable operation) abundantly satisfie every ones desires. But we have now said enough of this incomparable Medicament in the form of a Powder. But if this Powder be reduced, by melting it into small Stones of the colour of Milk, it then requires another way of using it. If therefore you would use one of the said Stones, instead of the aforesaid Powder, and purge and free the Body hereby from all hurtfull humours, you must then put it for some hours in a spoonfull of Wine, and so drink off the Wine, and it will effect the same operation, that the Powder is wont to do. But yet you must be wary in the use of these Stones, that you do not wast and spend the strength of the Sick so much, but that there may be but just as much as is requisite for them, and as they can bear. But when their strength is spent, you must put in a greater or lesser Stone into the Wine to be imbibed; but an Infant is not so strong, nor can bear so much as a strong Man can, whose strength is far greater. It is therefore necessary that those, who desire happily to cure the Diseases of mankind by the help of these Stones do (for the first time) leave one of these Stones one, two, or three hours in the Wine, and then heedfully mind the operation of the said Wine when drunk off. If the operation be to his mind, he may always observe that length of time, as it lay in the said Wine. If the operation be less than what you would have it be, it may lie longer; if stronger and greater than what you would have it, it must lie less while in the Wine, and thus by this provident forecast may you so order it, as to have it just to your mind.

Now, although the use of this Medicament in the form of a Stone be far better than using it in the form

of a Powder as being more pleasant, and more gratefull, yet notwithstanding it is better for him that cannot so accurately observe the use of the same, to make use of the Powder it self, that so they may be the surer of what they do. But they that do know the way of using the said Stones, they need not use the body of the Powder, forasmuch as they who drink that Wine wherein the Stones are macerated, may have the fruition of the virtues alone, without the corporeity. Those very Stones too, though they are several times steeped in the Wine, do not (I confess) lose their virtues, but yet they grow less especially if (for the stronger purgations sake) they are boiled in the Wine which is poured upon them, for the boiling diminisheth its little body, and lessens the Stone. And these are the directions which concerns the use both of the Stones, and of the Powder it self, in the taking away and purging out all the hurtfull and evil humours in Man's Body, both in young and old.

The body therefore being sufficiently purged by our said universal Medicament, it will be expedient (for the prevention of a relapse) to observe a due Dyer, and to hold such a Stone in their mouths a quarter or half an hour every day, which will attract unto it self not a little vicious tough moisture, out of the Brain and Stomach, which you are to spit out so often, and so long, untill there flows no more plenty of waterishness into the mouth. This attraction will much ease the Brain and Stomach, and free it from noxious obstructions, and will take away the preternatural Appetite and Thirst, and so may a Man expect his Dinner without any preternatural Appetite. For when the internal Vessels of the Body of Man, as the Spleen, the Liver, the Mesentery, are obstructed with tough humours, and the Stomach it self is stuft with these obstructions, insomuch that

for some hours after his rising out of his Bed, he is usually troubled with a preternatural Hunger and Thirst, and with a debility and faintness of his Members; many think that these inconveniencies can be averted by Food and Drink, but they are out. For experience teacheth that the weakness of such Men is increased by eating and drinking a little, so far is it from being capable of being removed and taken away by such means.

From whence it is clearly manifest that that weakness is not to be imputed to the want of meat and drink, but rather to the obstructions of those inward Vessels, which hindring the passage of the Vital Spirit to the Nerves, which it ought to strengthen, doth of necessity cause such a debility and weakning of the Members, and begets in the Stomach a preternatural Appetite. If therefore such obstructions be by little and little taken away by the daily use of these Stones, so that those tough humours cannot encrease, it must necessarily follow, that the Disease must give place by little and little too, and be diminished and consequently the former good health must follow with a prolongation of the Life.

The Stomach therefore being beset with such tough and Melancholy humours, it cannot possibly be that they should so very easily be expelled, but ’tis behoovefull, that the Wine wherein the Stone hath been boiled be drunk, and so cast them forth: And that Stone may be afterwards held in the mouth (according to the aforementioned way) for conservation sake of health. But if it should happen that those tough humours of the nauseate and weak Stomach, and those clammy obstructions of the Vessels, and that preternatural Hunger and Thirst

should not be taken away by this way of healing; 'tis a sign that all these inconveniencies have a deeper rooting and cannot be thoroughly removed by the said Medicaments. And therefore such Remedies as are stronger and more powerfull are to be made use of, which may soften those tenacious humours of the Stomach, may incide them, and cast them out, and may unlock all the obstructions of the body, and open the passages of the Vital Spirit, to enter unto all the Members, and may strengthen the weakned Stomach, whereby it may be capable of concocting the meats it takes, with a laudable digestion, and generate good and laudable bloud.

Forasmuch therefore as such an efficacious Medicament as is fit to take away all the obstructions of the inward Bowels, and Vessels, and to corroborate a weak Stomach, is to be found but with a very few, it hath seemed good unto me, to reveal at present such a Medicament (for the sake of mankind) and which is so efficacious a Remedy, as I dare boldly affirm the like thereof hath not for above these hundred years last past been in the hands of any Physician, but was found out by my self by divine instinct, and which I here publish with a willing mind.

The Preparation thereof is as follows.

Take of new and strong smelling *Myrrh*, and of the purest and clearest *Aloes*, and of the best English *Saffron*, of each one, two, or three ounces. Beat them all into Powder, and pour thereupon the strong, operative, and *volatile Spirit of* Mars, (of which I have made mention in my Book of Fires) and dissolve as much thereof as will dissolve, to the Solution add a little of my *secret Ferment*, which will presently cause

it to ferment. Now before the putting your ferment thereunto, you must have an Alembeck or Head ready at hand, and Paper and Past wherewith the Alembeck being put upon the Body, may be well luted, and suffer nothing to pass out.

For as soon as ever the Ferment, shall be added to the Solution, it presently begins to ferment, and the glass being placed in Bal. and feeling the heat, that volatile Spirit of the Iron will ascend readily and nimbly like the Spirit of Wine, much inferiour thereunto as to its heat I confess, but yet of a far more penetrating efficacy. The Spirit being all ascended the remaining humidity is to be drawn off even to the consistence of honey, but yet so gently, that the remaining Juice may not at all smell of burning. This done, take out the glass and let it cool, and pour on upon the Juice after its refrigeration the same volatile Spirit of *Mars* which you separated from the matter by distillation; which Spirit will dissolve that thick Juice, which being dissolved will become a Balsam of a strong Odour, a penetrating Efficacy, and a red Colour like bloud; which (by reason of its penetrative Efficacy) is to be kept well shut, and may be accompted of as a Balsam of Life; for it takes away the obstructions of the whole body, and doth mightily corroborate and strengthen all the internal Vessels and Members, and preserves them safe from all corruptions. Nor is there any Balsam whatever, being brought whencesoever it will, that is comparable unto this. For it does not onely defend the living bodies of men from all Diseases, but likewise performs the same effects in the preservation of the dead bodies from putrefaction, as other Balsams do, but far more efficaciously: For it penetrates all things, and by its so admirable vertue keeps them from putrifying, insomuch that no body

can enough admire these so great and wonderfull works of God. Now to try the truth of this, any man may make proof thereof with a Frog, Mouse, or such like small Creature.

The use of this same Balsam as to the taking away of all the obstructions of the internal Vessels, and corroborating the weak Stomach, is this, *viz.* The body is first of all to be well purged, and then 1, 2, 3, 4, even to 10 or 12 drops thereof (according to the Age of the Patient) is to be administred to a fasting Stomach, in that Water, which was drawn over after the volatile Spirit was all come, as aforesaid.

After the taking of the Medicament, you must fast an hour or two, this Balsam penetrates all the Members of the whole Body, and strengthens the Stomach, Brain, Heart, and all the internal Vessels, takes away all obstructions, makes good blood, excites a good appetite to meat and drink, and augments the radical humidity, and so conserves the body of man (by God's Grace and Blessing) even unto old Age.

But let it not seem to any one a strange thing, nor let them suffer any such thoughts to come into their minds, as if others have already had this Balsam, because *Paracelsus* made his *Elixir Proprietatis* of Myrrh, Aloes, and Saffron, and so others too insisting on or tracing his footsteps have made the same, and which hitherto hath been in great esteem amongst all skilfull Physicians; no, no. That *Elixir* of *Paracelsus*, being as yet in its corporeal form, and being nothing else but the meer body, is far short of the Vertues of my Balsam; for my Balsam of Life excels, by reason of its most efficacious Spirits, which penetrate the whole body of man, and fills all his Spirits, and even the whole body it self with its most pure vertues,

corroborating the same, and driving away all corruption and rottenness.

Farther, if any one be minded to make this Balsam of Life yet far more efficacious and powerfull, he may instead of the aperitive Spirit of *Mars*, use the Spirit of Gold, which questionless will enrich the said Balsam with far greater vertues, but then the cost will be the more, so that this Medicament will be fit for the rich onely. A man may also in the preparation of this Medicament, preserve the volatile Spirit apart, and use the same as a spiritual Balsam, or *Elixir* of Subtilty, for the conserving of the inward parts of the body, and so thou wilt most potently dissolve (by its more penetrative, more potent, and more efficacious vertues, all hurtfull obstructions, and all the most clammy and tenacious humours. And after the same manner may you reserve the simple Balsam apart for its proper use.

Now by this way which I have here delivered, may be made likewise other efficacious and penetrating Spirits and Balsams of great worth, out of other Animals, Vegetables, and Minerals, wherewith a man may perform wonderfull effects in Medicine. I have here laid a foundation, whereupon every one may as he thinks good build a strong Edifice. Nothing verily would be more desirable, and more to be wisht for, than to substitute, and introduce such subtil and penetrating Medicaments, in the room of so many unprofitable compositions made by their boilings and stewings, *&c.* It would be far better for the health of mankind, nor would so many men die, remediless, of such small and contemptible Diseases as arise meerly from the tenacious and pituitous humours of the Stomach: What vertues I pray can there be in the common distilled waters of herbs? Verily scarce any

at all. But if they be prepared according to the way by me prescribed, they would be (both in odour, tast, and vertues) much better and more profitable.

If to some common Wine, which hath already undergone its natural and accustomed fermentation, there be another fermentation given it by the help of my secret ferment, and then the Spirit thence extracted, it will be of so strong and efficacious a savour and odour (especially if some Spices, and other sweet smelling fragrant Herbs, be fermented together therewith) as that other Wines may be thereby rendered savoury and well tasted, and odoriferous too. Upon this account I dare boldly and constantly aver, that the Spirits of Metals deserve the chiefest place in Medicine above all other things whatsoever: But I do not as yet know what may be done with them in metallick matters, onely thus much, *viz.* they are wont to coagulate the common and running Quicksilver. Did we but know the Art of fixing them (Spirits) and making them constant, without question we should not onely obtain an excellent universal Medicament in medicine for the conservation of the health of mankind, but also a most absolute Tincture for the tinging of the bodies of the metals. That this is possible, the Writings of the Ancient Philosophers do too and again hint so much, but yet I have not as hitherto effected the same. However I am content, and most heartily thank my God, in that he hath honoured me with so excellent a Medicament, which haply no body for this hundred years last past hath been rendered a partaker of: For had it so been, it would long since have been revealed and disclosed. 'Tis not a Boys play nor so very mean a thing, to bring not onely Vegetables and Minerals, but even the most fixed metals themselves, in (as it were) a moments time, to

such a pass, as to undergo a fermentation, and to yield (by distillation and rectification) so strong and penetrative a Spirit; believe it or not believe it, all's a case. 'Tis enough for me that I can perform the same whensoever I please; which thing the incredulous shall very shortly, (God willing) find to be most true, and see it with their Eyes, and feel it with their hands. But however, by the same way, as the aforesaid Balsam is ordered to be prepared, may various and unknown effectual Medicaments be made out of other matters.

A Preparation of *Opium* would yield such a Spirit, as (by its odour) would procure rest, and lay the exteriour Senses asleep.

The like would Tobacco, or Henbane, and other such like Herbs effect, and so would the other inebriating Herbs, whose Spirit being mixt (even in the least Dose) with Wine, or Ale, and so drunk off, would presently make a Man drunk. By the help of such kind of Spirits might many waggish tricks be done, as for example, If Barley, Pease, Beans, or other Seed and dry Fruits were moistened or steeped in the same, and thrown to Fishs, Birds, and other wild Animals, and they eat of the same, they would be made so drunk, as that you may take them with your hands. In like manner, by such kind of Spirits emitting such a strong odour, may all mischievous wild Beasts, as Bears, Wolves, Foxes, and other such ravenous Creatures be driven away; and on the contrary, may Fishes disperst in the Waters be gathered together into one place. For they (*viz.* the Beasts) shun all strong odours and stinks, but these (*viz.* the Fishes) are wont to follow after them in the Water.

Briefly, and in a word, those aforesaid Spirits

would be fit for the effecting of such wonderfull conclusions, as is no ways fit so much as once to mention, much less to reveal and make known the same. And for this reason I have determined with my self to bury this so great a Secret of Fermentation with me in my Grave, and not to disclose it to any one. In the mean while I will take care to provide a sufficient plenty of the best Medicaments, whereby I may be serviceable unto my Neighbour. And I will omit taking care about other needless affairs, unless it should chance to happen, that that Turkish Tyrant thirsting after nothing but Bloud, should approach too near unto us (which God forbid) against whom my wonderfull and hitherto unknown Artificial Fires, and other new inventions of mine, arising from my unwearied Labours, will be of such resistance, as that I am confident his numerous host will be rid of the care of again returning back. For it is beyond all kind of doubt, that such fiery Globes [or Granadoes] may be made, as for one pound thereof to exceed the violence even of twenty pounds of Gunpowder. And who knows for what cause God hath vouchsafed the revealment of such great Secrets, at this nick of time? Perhaps to shew his Omnipotency, he will effect some singular and admirable work for the freeing of the Christian World by this ultimate and extream defensive way, out of the most present and imminent dangers: And though it (*viz.* the Christian World) be immerst and even drowned in the Labyrinths of various Errors, and is gone greatly astray from a true Christian-like life, yet notwithstanding it doth yet contain many a pious Soul. Never did God make, or vouchsafe ought without a cause; And therefore it is altogether credible, that these new inventions did not light into the hands of men in vain, the which time will manifest.

The Explication of the two Circular Figures of the Quintessence at the beginning of this Fifth Part of the Pharm. Spagyr.

About the Circle of the first Figure. *The Quintessence of the Minerals, is a Universal Medicine.*

Without side the Square in the Circle. *Separate the pure from the impure.*

Within side the same Square. *The four Elements.*

In the four Angles of the Square. *Fire*, *Air*, *Water*, *Earth.*

Without side the Triangle. *The three Principles.*

Within the three Angles. *Salt*, *Sulphur*, *Mercury*. *Make the fixt Volatile.*

Within the Circle, in the Triangle. *Two Contraries.*

Within the Central Circle. *The first Ens.*

Which if you begin to read in the Center, the sense will be thus. *From the first Ens, proceed two Contraries; from thence the three Principles; from them the four Elements; from which, if you separate the pure from the impure, you obtain the Quintessence, which is an Universal Medicine.*

About the Circle of the second Figure. *The Salt of Metals, is the Stone of the Philosophers.*

Without side the Square in the Circle. *And bring it unto Maturity.*

Within side the same Square. *The four Elements.*

In the four Angles of the Square. *Fire*, *Air*, *Water*, *Earth.*

Without side the Triangle. *The three Principles.*

Within the three Angles. *Salt*, *Sulphur*, *Mercury*. *And*

the Volatile, make fixt.

Within the Circle of the Triangle. *Dissolve, Coagulate.*

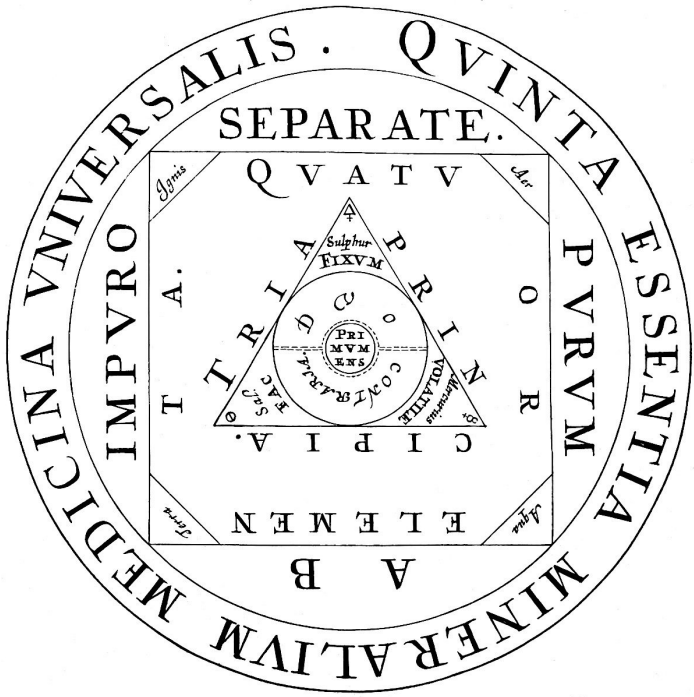
Within the Central Circle. *The primum Mobile.*

To understand the Scope of those two Figures, you are to begin with the first, in the Center, and next read the Center of the second, for they answer one another in all their Parts. As in the Center of the first Figure are these words: *The first Ens*. Which in the Center of the second is, *The primum Mobile*. And so on to all the other parts.

The End of the Fifth Part.

Quinta Essentia in die Pharmacopoea Spagirica.




QVINTA ESSENTIA MINERALIVM MEDICINA VNIVERSALIS.
PVRVM IMPVRO SEPARATE.
QVATVOR PRINCIPIA.
TRIA ELEMENTA.
A B
Ignis
Aer
Aqua
Terra
Sulphur FIXVM
Mercurius VOLATILE
Sal
PRIMVM ENS
COMPOSITVM

THE SIXTH PART OF THE Spagyrical Pharmacopœa.

Or a Light lately risen, and a strong Key for opening Philosophick Verity, treating of the most secret Fire of Philosophers, *viz.* How it is to be used profitably and commodiously for the preparation of many Royal Medicaments; and how, by the benefit of it, *Vegetables*, *Animals*, and *Minerals*; venemous, fœtid, noxious, and wholly adverse to Humane Nature, may be converted into a gratefull and most salubrious Medicine, Mineral-Salts, and the Corrosive Spirits of them dulcified; and fixed Metallick; Bodies transmuted into Volatile Spirits. As also how these Volatile Spirits may

again be changed into Bodies fixed, tinging, and penetrating through every Metal and Glass, and other rare things of that kind may be performed.

READER,

I did some time since, sincerely discover to certain of my Friends, some of the best of the Arcanums *(described now publickly) in this Treatise, with such condition as they themselves should prepare the same: but they have not as yet set about the Work, and perhaps for no other reason, than because they thought it a matter not of great but of small moment. Hence it was, that they could not believe so great a Medicine could be prepared in so few days. It is manifest by the Writings of Philosophers, that* Maria *the Prophetess, Sister of* Moses*, could ripen the Stone of Philosophers in three Days. Likewise, some Philosophers have absolved their Work in a Week. Others have consumed some Months labour upon the same. But now, those erroneous Fellows (who run from one to another, and although themselves be rude and ignorant of all things, proffer their labour for reward to make the Stone of Philosophers) require to themselves for digestion the space of one, two or three whole years. But what a vast difference is there between three days and three years. As for my self, I indeed as yet have never elaborated so great a Work, but have seen with my Eyes so great a possibility thereof, and with my hands handled things so, as (if time and place be given, and God grant success) I am confident I shall prepare this supream Medicine in a very short space of time. But I can truly affirm, that in all my life I never aspired to things so high; yet what hath been conferred on me by God, I now make common. Wherefore, he (whom God shall favour) may there begin, where I have ended, and happily consummate the Work: but if he (whom God*

favours not) shall attempt any thing therein, let him not disquiet me with troublesome Interrogatories; for I know not how to answer more, than are here discovered by me. Yet (if God please) after some short space of time, I will clearly expose to publick view, whatsoever I have found and seen in the particular Melioration of Metals. Which indeed will contribute great Light to this later Age of the darkened World.

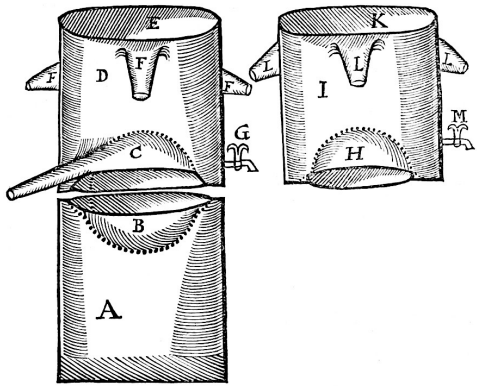
CHAP. I.

Describing that artificial Philosophick Distillatory Furnace (of which the little Book of Fires treats) by the help of which in the space of one hour, all Chymical Operations at one time, the secret Fire mediating, may be demonstrated so, as was never yet described by any Man.

Get a Furnace made of good Earth (which in burning will be rendred as compact and solid as Glass; such you may find about *Colen*, *Sibburg*, *Freichiem*, or *Waltenburg*) in its Diameter, at least two Foot broad, but rather (if that well may be) three. Prepare a Vessel like the Hemisphere or half-Globe, having three or four handles, to be hanged up by, fill that with cold Water, and your Recipient or Blind-head will be perfect. Then fit to it a plain Pan of good Earth, the breadth of three or four Thumbs, and a Thumbs breadth high. This Pan fill with common Sulphur, mixt with some other Mineral Subject, as *Mercury*, *Auripigment*, *Arsenick*, or *Antimony*; which you desire to fix, either particularly into *Sol*, or universally into Medicine. Kindle the Sulphur that it may burn, then this Sulphur will calcine and fix that subject (in the Fire continually burning,) which was put in to be fixed. If in burning the Sulphur be deficient, it must be supplied with other Sulphur. If

the Sulphur should happen to be extinguished, you must kindle it again, that it may constantly burn and never go out. It will not easily go out, if you prevent the extinction, by putting a little Cotton in the midst of the Pan. When the burning Sulphur, with its penetrating and ripening Fire, penetrates the subject added, then the volatile Mineral at first cannot bear patiently the vehemency of the Fire, but a part of the same is elevated upwards with the fiery Oil (fixing all Mineral subjects) which concretes round about to the Vessel, and again distills down upon the burning Sulphur into the Pan, so as it excites no small admiration in the Beholders. The motion of this Oil, which is so often and long driven upwards and downwards; Philosophers have named their Distillation, Ascent, and Descent, also Cohobation and Circulation: but the Sulphur continually burning, they called Calcination and Solution. For, in this operation, two very potent Fires act. The flame of Sulphur is a strong fixing Fire, but stronger yet is that fiery Oil continually distilling. By the help of both which *Stygian Fires*, the volatile subject in the Pan, is in a short space of time (unless it was very impure before) without any diminution of its weight fixed into a fixed Medicine. It is to be admired, with how great virtue, either Fire is endewed, for fixing volatile Metals; also it is pleasant to behold, how (when any drop of that Oil of Sulphur driven upwards distills down again upon the burning Sulphur) the flame that ascends then, will be red as bloud, which otherwise from Sulphur onely ascends yellowish. The repeated Distillation of that into the under set Vessel was by Philosophers called Inceration: But when the whole resided in the bottom without any ascending fume, that was by them called Fixation.

These operations I have performed with my own Hands, and seen with my own Eyes. More at this time I dare not publish; for more than enough is already spoken to impious Men. Which indeed I should not have done, if this excellent Philosophick Work had not been made too common already, or (to express my meaning more plainly) if it had not fallen into the hands of unworthy Persons, to me most ungratefull. For indeed I permitted onely some few of my Friends to see this Philosophick fixing Furnace; yet the knowledge of it was by them so far divulged, as I repented I had ever communicated it. Nevertheless, instead of that, not long after by God was given to me a certain other, far better and more elegant gift, for he shewed me such an Instrument, as would far more commodiously than the former, receive the ascending sulphureous fume, so as none of it should be lost. Therefore this divine gift shall by me be more warily kept than the former.



The Explanation of the CUT.

A. ***Is the standing part of the Furnace.***

B. ***The lower Hemisphere or half Globe, which is to contain the Sulphur, or what you intend to make into Oils or Spirits.***

C. ***The upper Hemisphere with its Pipe to draw the Oils or Spirits by.***
D. ***The body that holds the Water.***
E. ***The Cavity or top of the body to put in the Water.***
FFF. ***The handles by which it is hanged up, which are made of the same Earth that the Body is made of.***
G. ***The Cock to let out the Water, that you may put in more cold.***
H. ***The Hemisphere to work the Minerals and hath no Pipe.***
I. ***The body to hold the Water to keep it Cool.***
K. ***The Cavity of the Body to put in the Water.***
LLL. ***The handles to hang it by.***
M. ***The Cock to let out the Water that you may put in more cold.***

CHAP. II.

The way of preparing another Medicine of Sulphur onely.

Fill an earthen Pan full of Sulphur, and set it under the Blind-head. Kindle the Sulphur and keep it continually burning for eight or fourteen days. And when the burning Sulphur causeth its Oil to ascend, and the same again descends upon it, and this ascent and descent hath so long been made, as untill the Oil is fixed, and no more ascent is perceived, then let the Fire go out, and that which you find in the bottom, looking black as a Coal, take out, pour clear Water upon it, and make them boil together. In this boiling the Water extracts the fixed Oil of Sulphur, which passed into Salt, from the black Fæces. This extracted Salt distill through a Filter, and permit the Water to exhale in *Balneo*; so the Residue will remain in the

bottom sweet, in the form of a sowerish gratefull yellow Salt. Which take out, and put into a clean Crucible, where keep it hot, but not red hot; then the Salt will wax red. This dissolve again and Filter, and it will leave some Fæces. You may reiterate this operation if you will, and the Salt will be so much the more pure. This Salt is of a middle tast between sower and sweet: Of which five or six grains being taken inwardly will penetrate the body and strongly provoke sweat. But a larger Dose will provoke gentle Seidges, especially if the operation be made in some Iron Pan, yet it contracts from the Iron a sweetish tast, but that is not at all to be feared, because the Salt plainly deposits this tast, especially if you heat it hot and dissolve it, coagulate and heat it hot again, unto the third time. For then it loseth that tast, and becomes a sweet red Salt, which is a safe remedy against all Diseases, where there is need of sweating and purging.

Note, here is need of caution, that in making it hot, your Fire be not too strong, and so the virtues of your Salt diminished, which is a thing accurately to be minded. Ancient Philosophers likened this operation to such a Fire vomiting Dragon, as devours his own Tail, and converts it into a salutary Medicine. The Dragon is burning Sulphur, his Tail is its fiery Oil, which slides down upon the burning Sulphur, and in it converts it self into an efficacious Medicine.

Note, I would have you give credit to me, in these Works, which I here have opened in few words, are many things of great worth contained. Therefore, if you be wise, you will more diligently search into the matter, and find out much more than is here disclosed by me.

CHAP. III.

Anther secret Fire of Philosophers, by which all venemous and fœtid Vegetable, Animal, and Mineral Subjects, may be changed and prepared into a most efficacious Medicine.

Rectifie Spirit of Wine so perfectly well from all Phlegm, as it will all burn away. For this way you will have a secret Fire, by help of which you will be able to effect wonders in Medicine.

CHAP. IV.

Where first is exhibited an efficacious Medicine from this Vegetable Fire it self.

Prepare you of stony Earth polishable in Fire, or of Metal, a Furnace in such wise, as under it a flaming Fire may burn, and yet none of the fume fly away, but in it condense either into Water or Oil, and thence descend into some fit Receiver. Under such a Furnace, in some earthen Pan kindle an ounce or two of this subtile Fire, and let it burn. The Spirit of Wine being burnt, the volatile Salt as incombustible (yet the volatile Mercury of the Wine) comes forth, is cooled in the Receiver, and so preserved.

Note, when the first Spirit of Wine is burned, more must be put in. Of how great profit it will be in Medicine, you may easily judge, because it is the immortal and incombustible Soul of Wine. How much it is able to effect in Alchymy, is not very well known to me, I not having laboured much in it as yet. *Basilius* touching this Mercury, thus Writes: Whosoever can obtain it, will be a principal Master in Chymistry. He, as I judge, well knew how from Gold its Tincture was to be extracted by the help of

this. But of these enough at this time.

CHAP. V.

How by the benefit of this secret Vegetable Fire, the Microcosmick Mercury may be corrected, freed from its nauseous stink, and converted into a sweet Medicine.

Rectifie Spirit of Urine as highly as you can, according to my Prescripts, largely described in the Book of Furnaces. To this Animal Mercury add five fold or six fold its weight of our Vegetable Fire, with which fill a Pan, and kindle this Fire under our Philosophick Alembick; then will our Fire burn up all the nauseous stink of the Animal Mercury, so as it will ascend with a gratefull odour and tast. If it be not to your mind the first time, commit the same to this purgation a second time, and make it pass over; then you will find your Animal Mercury sweet, by virtue of which you will be able to do great things in Medicine, because it forcibly penetrates. Therefore a diligent Physician should not be ignorant of the use of this. It is known that Spirit of Urine doth much good in Medicine yet it is commonly abhorred by reason of its unpleasant tast. But when it hath sustained the trial of our Philosophick purgation, then it ascends into its Heaven, that is, into the Alembick without stink. Also by help of this purgation, all other fœtid, bitter and unsavoury Vegetable, Mineral, and Animal Subjects, may be purged, rendred sweet, pleasant, and gratefull, as the following examples will prove.

CHAP. VI.

Recipe of common Sulphur, Tartar, and Niter, of each one pound, pulverise, mix and decrepitate them in a

Crucible, kindling them on the top, otherwise they will fulminate. When decrepitated, melt and pour out the mixture, reduce it to Powder, and extract thence the Tincture with Spirit of Wine. Burn away the Spirit of Wine under the Philosophick Alembick, and what ascends reserve for your use in Medicine. What remains in the bottom will be sweet and void of all evil savour, because the Spirit of Wine hath burnt up all the stink. This Medicine is a most excellent Diaphoretick.

CHAP. VII.

How the Tincture or Soul of Antimony may be purified by the benefit of this Vegetable Fire.

Recipe of Antimony, Tartar, and Niter, of each alike; decrepitate, melt, pulverise, and extract the Tincture, which cause to pass through this Purgatory Fire, and you will have a safe Medicine against all Diseases. But if you would render it yet more excellent, to this Antimony (which hath already once sustained that Purgation) again add its own weight of Tartar and Niter; decrepitate, melt, extract, and cause it to burn as before, and you will have your Medicine more excellent. And if you shall repeat this labour the third time, you will have it far more excellent, for every time there are some Fæces deposited, whence the Medicine becomes more efficacious.

As is said of Sulphur and Antimony, so also all other stinking and bitter Subjects; yea the stinking Dungs of Animals may be so purified as to become sweet. But there is no necessity to speak hereabout in this place. For whosoever studiously searcheth for some famous Medicine, will easily find some excellent thing, so as he may attain both Riches and Honour according to his wish.

CHAP. VIII.

How by help of the Vegetable Fire, Mineral Fires may be extinguished, and the corrosive fiery disposition of them converted into sweetness.

It is very well known, that the greater common Fire doth always (as often as one is set near the other) either extinguish the lesser, or cause it to languish, the same also happens to Philosophick Fires. As for example, Put into a Stone dish or Pan, Spirit of Salt, Vitriol, Niter, or Sulphur, or some other acid Spirit, and three, four, or six parts of the best Spirit of Wine which kindle, and the Spirit of Wine will burn away, but the acid Spirit through the subtilty of the flame becomes sweet. Which sweet Spirits, especially that of Sulphur and Salt, manifest great Vertues in Medicine. *Basil Valentine* speaks of the dulcified Spirit of Salt, that it extracts from Gold its Tincture; and that he, who knows how to dulcifie it, will be honoured by Philosophers. He in like manner teacheth, that Spirit of Wine is seven times to be abstracted thence: Yet undoubtedly he intended not the vulgar Abstraction, but this secret Abstraction rather, of which we now speak. Because such Spirits are not dulcified at one time, but Spirit of Wine is often to be abstracted thence by the help of Fire, before they will be sufficiently dulcified.

CHAP. IX.

Another way, by help of other Fires, to cleanse and sweeten Vegetable, Animal and Mineral Subjects.

Every man knows, that the Nature and Property of common Fire is, to absume every stinking Sulphur, to drive away *Mercury*, and leave nothing but dead Ashes, with a little fixed Salt; which is no Correction,

but a violent Destruction and Corruption of good things. Therefore, in preparing famous medicines, we should use a better Fire, *viz.* such, as neither consumes Sulphur, nor drives away *Mercury*, but onely ripens, cleanseth and swetens them; as will be proved by these following Examples.

First let us make trial with the (to us abominable) Dung of men, and see, whether its Stink can be totally taken away, and of it an Universal medicine be prepared.

It is very manifest, that the Dungs of Animals crude and not prepared, are of some use in medicine, and we know they have been long in use with Galenists and Apothecaries: For they presume to cure the Jaundies with Goose-dung; Feavers with Horse-dung; Inflammations of the Bowels with the distilled Water of Cow-dung, which they call the Water of all Flowers; and the Quinsey, with the white Dung of a Dog, which they call *Album Græcum*. Pertinent to the purpose, History makes mention of a certain Countryman labouring with a Quinsey. To this man a Physician gives a Bill, by which he was to go to an Apothecaries Shop, and buy *Album Græcum*. The Bill he gave to a Boy in the Shop, who having read it, looked into the Box in which *Album Græcum* was wont to be kept; and finding the Box empty, bid the Countryman stay a little, and he would serve him presently. But the Boy not wise enough to conceal the Secret, runs presently into the Church Yard, where he gathered some of the white Dung of Dogs, which he brought home, and put into his Mortar to pulverise. The Countryman seeing this, spake to the Boy thus: I pray thee lay aside those things, and give me what I have need of; for I can stay no longer. To which the Boy answered: This is that the Physician

prescribed you; therefore stay but a little while, for it will be beat enough presently. Then the Countryman angerly said: What do you say, you Whelp! Must I buy Dogs-turd of you for Silver? I have enough of that at home: Therefore you and your Doctour shall eat it your selves for me. And having spoken thus, he went out of the Apothecaries Shop in a great rage. Many such Histories are variously commemorated: by which you may clearly see, that the Dungs of Animals, although crude and not at all prepared, have been used by Apothecaries. All which had they not been usefull in Medicine, would long since have been abrogated. But humane Dung, which deservedly is to be preferred before all other, is not used medicinally; and that onely because of its evil smell. Yet I have known some old Women give that to be taken inwardly by such as laboured with Feavers (but without their knowledge) and so have expelled those Feavers. There are some Chirurgeons so skilfull as to know, that the Salt of humane Dung onely generates Putrefaction, but on the contrary all other Salts preserve from it. Wherefore they use that for putrifying such excrescent Caruncles, as they fear to cut off, by reason of the intermixed Veins. Yet, that humane Dung (if inwardly taken) wants not its effects, no man doubts: but because of its great Stink, its use is to be abstained from, and not to be admitted in medicine. Nevertheless, if it can be freed from its abominable Odour, it may be used in medicine, otherwise not. Wherefore, *Paracelsus* so highly esteemed it, as he said: From him Heaven and Earth is hid, to whom humane Dung is not known. An History, which shews what happened in *Cæsar*'s Court, between him and the Court Physicians, plainly sheweth this. For when those Physicians asked him to leave behind him some medicinal Experiment unto

them, *Paracelsus* ordered humane Dung to be brought and laid before them. They seeing that, went away in a rage and reviled him. But *Paracelsus* answered. You indeed run away, thereby proving your selves unworthy of the Secret I purposed to have discovered to you. Whence it is very manifest, that *Paracelsus* knew how to render stinking Excrements fit for use. For undoubtedly, he never administred them to any man, before they were prepared; because he had other Medicaments always in readiness. Now, that it may be known to be possible to take away the Stink of Dungs, I will prove the same by the following.

To a sound and healthfull Man for two days together give nothing to eat, but a little well baked Wheat-bread; or to drink, but good Wine. His Excrements for these two days cast away. On the third day let him eat a peculiar Bread, with which is mixed before it is baked about an Ounce and half, or one Ounce of my Blood of *Sol*; also let him have an Ounce and half, or one Ounce of the same Blood of *Sol* mixed with his Drink, that it may thereby be tinged with a red Colour. And all the third day let him eat nothing but this Bread, in which the Blood of *Sol*, or Gold rendered irreducible hath been baked, and use that Wine onely, which the Tincture of Gold hath coloured. Then on the fourth day, let his Excrements (which will be tinged with blackness like a Coal) be put into a glazed Pan or Dish, yet with this Caution, that no Urine be mixed therewith; because that will be injurious. Indeed these Excrements will have a very evil Odour, but that you may take away their stink, and convert them into an Universal Medicine, proceed thus.

If these Excrements be in weight one pound, or somewhat above, pour on them two Ounces of well

dephlegmated Oil of Sulphur, or in defect of that, as much strong and well rectified Oil of Vitriol; mix the whole well stirring it with a wooden *Spatula*, that the Oil may act upon the Excrements: Expose the whole to the Air for one Night; and that mineral Fire will calcine the Dung Philosophically, and deprive it of all its stink, without any diminution of its Weight; which is very strange. And if any part of the evil Odour should be left remaining, add to it again one Ounce and half of the Mineral Fire, and suffer them to stand together for one Day and Night. Then must you also have in readiness the Animal Fire, *viz.* Spirit of Urine exactly rectified, of which pour leisurely and by degrees upon the Dung, so much, as until both those contrary Spirits cease to act each upon other, and are still: For then those two contending Fires have mortified each other, whence a middle Salt is generated. Upon this mixture put into a Glass do you also pour so much of the Vegetable Fire, (that is, of the best Spirit of Wine) as may rise in height above it two fingers breadth. Set this glass in *Balneo*, and digest the whole for twenty four hours: For in that time the Spirit of Wine dissolveth that Salt, which proceeded from both the contrary Fires, together with the Microcosmick Salt, Sulphur and Mercury; and from that Gold, now the second time inverted, extracts the Tincture, which it hath, and is thereby tinged red as Blood. This Tincture pour off, and re-pour on other Spirit of Wine, and let that also stand twenty four hours in *Balneo* for extracting what remains: but this will have but little Tincture, because the first extraction drew forth almost all. Add both extractions together, and in *Balneo*, with very gentle heat, by Alembick abstract the Spirit of Wine from the Tincture; then will remain in the bottom of the Vessel a very red and pleasant Salt;

upon which must be poured so much Aromatick Spirit of Wine, as will suffice to dissolve all the Salt. Which Solution pour out from the Glass it was dissolved in, into a strong and very clean Glass-bottle, and keep it by you as a most pretious Treasure.

The Dose of it is very small: for if you give, at one time, 1, 2, 3, 4, 5, or 6 drops, it will provoke Urine, expel Sweat, and the Stone also powerfully. But if the dose be augmented, it purgeth the Belly, and that without any molestation. In a word, this Universal Medicine may safely be used in all Diseases. Yet because I intend brevity, I forbear to write more touching this Medicine.

The Excrements or Fæces, from which this Tincture is extracted, are not to be cast away, but must be calcined with Fire till they are red hot, and (after a strong *Aqua Regia* hath been poured upon them) the remaining Gold, which was not before extracted, must be dissolved. Yet you shall have very little of that; because the Man's Stomach did a second time invert that Gold, (which was once before inverted) and made it reducible, so as it could be extracted with Spirit of Wine by help of the Mineral and Animal Mercury. It is hard for me to believe, that a more excellent Diuretick and Diaphoretick Medicine can be found, than this Microcosmick Salt, which is tinged with *Sol*. For you will know of how great vertue this Diuretick and Diaphoretick Salt is, when you shall precipitate the acid Oil of Sulphur (or in defect of that, rectified Oil of Vitriol) with good Spirit of Urine, and reduce it into Salt. And will not such a Salt as this be far more excellent, when Sulphur the (Philosophically calcined) Salt and Mercury of the humane Body, together with the

Tincture of Gold have Access?

I have not writ any thing here of this Universal Medicine, to the end it should be preferred before others, because I very well know, we can of other Subjects prepare famous Medicines, and easily be without humane Dung; but whatsoever I delivered here, I did it for the good of all. For my part, I say, if any one hath no mind to proceed in this Operation, let him forbear. It sufficeth me, that I have signified to the World, how by the help of Art, all venomous and stinking Subjects may be amended and cleansed.

Thus may the industrious Physician, by the benefit of the three Principal Fires prepare many excellent Medicines, and before all sluggish and careless Physicians be had in great honour by the Sick, and obtain the favour of GOD and Men. For he may invert the Venom of Vipers, Serpents and Scorpions, and convert the same into an Antidote powerfull against the Pestilence, and other Venoms. He also understands how to prepare a Medicament of Toads safe to be given to dropsical Persons: of Spiders a Medicine healing the Leprous; of Cantharides and May-Woms, a certain Salt good against the Stone of the Reins and Bladder; of Earth-Worms, or Rain-Worms, a venereal Experiment; of Opium, Tobacco and Henbane, a famous Somniferous Medicine; of Wormwood a Stomachal and Antifebrile; of Hellebore, Agarick, Spurge, Asarabacca, Squill, and the like, an Universal Purging Salt; of Pearch-Stones, and Crabs-Eyes, a Nephritick Medicine against the Stone of the Reins and Bladder; and of Napellus, Stavesacre, and Wake Robbin, a famous Antipodagrick. These, and other such most excellent and presently medicinal Salts may after the same manner be prepared: These, for the health of infirm

Mankind I could not content my self to conceal. Indeed I could have writ more at large touching this matter; but brevity, which I now study, forbids a more ample Declaration.

CHAP. X.

Of the Nature and Property of that Fire, which lies hid in Tartar, or the Stony Fœces of Wine.

Tartar is a Salt, which in Fermentation separating it self from the Wine, adheres partly to the sides of Wine Cask, and partly resides with the Dregs in the Bottom. This Salt or Tartar, although it is numbred among Salts, yet it is of another disposition than all other Salts; because they may be dissolved in cold Water, but this Tartar cannot be dissolved, except in boiling Water onely. No Man hitherto was willing to open the Cause of this hard Tye. But I, seeing Death daily approaching nearer and nearer, was not willing to carry it with me to my long Home, therefore I chose rather to leave it behind me for Mankinds sake. And thus it is with Tartar. Tartar contains in it self a peculiar Sulphur by which the Salt is so bound or fixed, as it cannot like other Salt be dissolved in cold Water. For if the Sulphur be separated from it, it is easily dissolved in cold Water, like other Salts. Yet so soon as such Sulphur is taken from it, the secret Fire which lay hid in it, is also taken away: and thenceforth it can no more serve instead of a secret Fire, by which Metals are ripened into Tinctures; but is rendred onely fit to perform its Office in medicine. Touching which, for brevity sake we shall here make no mention.

The method of depriving Tartar of its tinging Sulphur, that it may be dissolved in cold, is thus: By burning two Pound of Tartar, reduce it into a white

Salt, upon which, if you pour Water to dissolve it, it will become a *Lixivium*. Which *Lixivium* pour upon one Pound of Tartar, and boil them together in an Earthen glazed Pot: Then the *Lixivium* dissolves the Tartar, and separates the binding or fixing Sulphur from the Salt. Then pour on one part of common Tartar, boil them together yet once, filter the boiled Liquour through Paper; then in the bottom will remain the Sulphureous Fæces, and the Water of Tartar pass through yellowish; upon which Water pour distilled Vinegar to mortifie the *Lixivium*. This being done, the Vinegar will also be coagulated with both Salts, and be changed into one Salt; which Salt in Medicine and Alchymy is of great use and benefit; touching which if I should here write more I should be too tedious: but (GOD willing) the manifold use of it shall be shewed in my Third Century. For here my purpose is not more at large to speak of the matter. [*vide Helm.* Fol. 183. and *Basilius* p. 240.]

That feculent Slime, which adheres to the sides of the Filter you should not cast away, but endeavour to fix. For then you will find some admirable thing, and more than here I dare discover. Because that is the genuine Coagulator of running Waters, which it hardens, and is joined in a singular familiarity with metals, and especially with *Sol*; as I with admiration have experienced. For in a few hours it tinged *Sol* with whiteness, and turned it into brittle Glass; whereas otherwise *Sol* is an Enemy to every volatile Sulphur. I do not believe there is any other thing in Nature second to this wonderfull Sulphur; which is endewed with a potency coagulating and hardning running Subjects. For nothing, except Sulphur onely, can be found, which coagulates and tingeth. *Mercury* and Salt tinge not: but Sulphur doth that. Consider I pray, how great power common Sulphur hath over

Mercury, since four Ounces of it can coagulate a Pound of running *Mercury* into hard and red Cinnabar. Also four Ounces of common Sulphur can coagulate two or three Pounds of Oil into a Liver-like Mass: and one Pound of Oil reduce ten Pounds of *Lixivium* into hard Soap. Likewise one or two half Ounces of the volatile Vapour of Sulphur in subterranean Veins, can coagulate serene Water into hard Rocks and Stones, as also all sorts of minerals and metals. So, that little Sulphur which is found in Tartar, can render much sower Wine or Water hard as a Liver; as is known to those that labour in Wine and Vinegar.

I once purposed and endeavoured to extract from Gold its Tincture by the benefit of Salts, among which Salts Tartar also was; whence my Gold came out white and altogether brittle as Glass. But I, being willing to prove whether my Gold was constantly white or no, cupellated that with *Saturn*; and then I found my Gold not to remain white, but to have received its pristine yellow Colour. That whiteness proceeded from nothing else, than the tinging Sulphur of Tartar, and because the Colour was not fixed, therefore in cupellating it vanished away:

Note: Hence, when I had broken small a little of this tinged white and brittle *Sol*, and cast it upon a little vulgar *Mercury* made hot in a Crucible, it presently had ingress, and coagulated the *Mercury* into an heavy white Body, which when I exposed to a cineritious *Examen*, all the *Mercury* vanished, and the *Sol* onely remained in its Colour. The Reason hereof was because the aforesaid Sulphur of Tartar was not fixed. Yet thence I observed, that it might be fixed with *Sol* into a constant Redness. If any one hath convenient time and place, he may more

profoundly search into this Work, because in it lies a great *Arcanum*. But how otherwise from Gold its Tincture is to be extracted, shall afterward be taught. Enough of that at this time.

But there remains this one thing to be spoken, *viz.* that whosoever knows how to conjoin the Sulphur of Tartar with the Sulphur of Metals, send to fix it with them, may certainly obtain the Tincture: As *Ripley* clearly intimated, when he said, He saw a red Toad so long and so often drinking of the Juice of Grapes, as until his Bowels burst. If you do more seriously think of this (and GOD judge you worthy of his Grace) you will experience wonderous things; if not, then conclude thou wast not worthy of those Secrets. So much may suffice for this time to be spoken touching the admirable Sulphur of Tartar. More elsewhere of it, if GOD will.

CHAP. XI.

Proceeding now to Metallick fixed Salts, Mercurial volatile and most subtil Spirits, let us see what they are able to effect in Medicine. And first let us speak of Antimony, as the Radical Juice of all Metals.

Recipe of the *Minera* of Antimony finely pulverised one Pound, of our secret *Sal Armomiack* six or eight half Ounces; which diligently mixed put into a coated Glass Retort, which set into a Distillatory Furnace, and apply a Receiver thereto, ministring Fire leisurely according to Art, that the Glass be not broken. In distilling first of all ascends a little sowrish Water, then (the Retort being hot) a thick Oil fat and yellow, in which is contained the most excellent *Mercury* of Antimony, which you may thence thus separate.

Upon the yellow Oil distilled, pour common Water, which Water will draw to it self the Salts, and precipitate the *Mercury*, like a yellow ponderous and shining *Calx*, which being edulcorated and dried, will be an Universal Purger. Its dose is very small. I use no more than a quarter of a Grain, which (saving your Reverence) gives me 3, 4, or 5 Stools: but to a robust man I give half a Grain, a whole Grain, and sometimes two Grains. *Note*: If a larger dose be given, this *Mercury* excites vomiting also, though very gently. If you would render it Diaphoretick, you must thence abstract rectified Oil of Vitriol. Then this *Mercury* of Antimony, which before was liquable as Wax, becomes altogether fixed and unmeltable; and then you may give of it from 1, 2, 3, to 8, or 10 Grains, which indeed move not Seidges, but provoke Sweat without weariness to the Patient, and performs the Office of a blessed Medicine against all Diseases, where Sweat is needfull. Reduce the *Caput Mortuum* taken out of the Retort to Powder (the finer the Powder is the better your Work will succeed) and having put it into a Phial pour Spirit of Wine upon it, mix them by a continued stirring and shaking of the Glass (for otherwise it turns it self into an hard stony Mass) and in *Balneo* digest it for a natural Day. Thence the Spirit of Wine will acquire a red Colour, which pour off, and repour on fresh Spirit, which also permit to extract as much as it can. Then with gentle heat of *Balneo*, abstract the Spirit of Wine from the Tincture, which will reside in the bottom like a red Salt. Which Salt is so great a Treasure in Medicine, as exceeds all estimation. For it passeth through the whole Body like Fire, and consumes Diseases, as Fire burns up Wood. For according as it finds any defect in the Body so it operates, expelling Sweat and Urine, purging out all malignant and

noxious Humours of the whole Body, and highly purifying the Blood, so as I believe no more noble Tincture and Salt than this can be extracted out of Antimony. Its dose indeed is very small, but of great efficacy, insomuch as using but half a Grain of it you will find a most evident Operation. Therefore, if a Master of a Family provide for himself but one Drachm of this Medicine, he may by the help of that for the space of one whole year not onely preserve himself and family from many Diseases, but also defend himself and them from all other Affects every where prevailing. Therefore let GOD have the Praise of it.

CHAP. XII.

That this way also may be prepared from Auripigment and Arsenick a Mercurial Oil, and a fixed Tincture.

Recipe of Auripigment one Pound of our secret *Sal Armoniack* four Ounces, which reduced to Powder mix, and distil in a Retort by degrees a volatile yellow corrosive Oil. At last, in the neck of the Retort will ascend a sublimate Red as Blood, transparent and as beautifull as an Oriental Ruby; the external use of which is famously medicinal against Ulcers and gangrenous Affects. And the yellow Oil is a most present Remedy for mortifying all gangrenous Ulcers, and laying a solid Foundation for their Cure, if the part affected be onely anointed with a Feather dipt therein. If any one pour Water upon the aforesaid Oil, that corrosive, which ascended with the Auripigment, will be separated and precipitated into a yellow *Calx*, which edulcorated and dried, becomes so strong and vomitive, as it cannot safely be given inwardly: but outwardly sprinkled upon Wounds, it lays a good foundation for healing. But if from the

aforesaid yellow Powder, Oil of Vitriol be abstracted, it then becomes so fixed, as it will bear the force of a most violent Fire, without any exhalation of fume; and then loseth all its venome, and may be most safely used from 1, 2, 3, 4, to 6, or 8 Grains, against the Pestilence, all Feavers, and such Diseases where Sweat is needfull. It is to be admired, that this Subject so very volatile and venomous, should by one onely abstraction of Oil of Vitriol, become so fixed and constant in Fire. Also it is no less admirable, that this Oil like any other Oil of Minerals, doth not ascend in the form of a Liquor, but like and in the form of some fat Vegetable Oil, whereas in it is not any fatness at all, because all proceeds from the Auripigment.

Moreover, it will be profitable also to teach, that the aforesaid fixed Auripigment (whensoever unto it, by the help of *Mercury* of *Luna*, ingress is procured) projected upon a Red-hot Plate of Copper, renders the same totally white and as tractable as Silver. Which things being known, although of little use, do notwithstanding savour of a pleasing Curiosity, by which you will find, that of red Copper, white Silver may be made. Also, after the same manner of white and red Arsenick, such a medicinal Oil and Tincture may be prepared for *Venus*. *Note*: Whosoever is desirous to labour herein, must studiously avoid the venomous fume: For Arsenick cannot well be handled without peril.

I might here also say something of the running *Mercuries* of Metals; but since they rather appertain to the Transmutation of Metals, than unto Medicine, I thought it best to pass over the mentioning of these in this small Treatise, and to publish them in the following Centuries.

CHAP. XIII.

Of the subtil and most penetrating Medicinal Spirits of Metals.

In my little Book of Fires, and also in my fifth Part of the *Spagyrick Pharmacopœa*, I have indeed made some mention of volatile Spirits, but for brevity sake concealed the method of preparing. When I considered, that such Works were judged by many impossible, I thought it would be worth while here to insert the Preparation of them; and that onely from one Metal, that every Man may see the Verity of all the other. For whosoever is desirous to operate in Metals, he may be able by this one Process sufficiently to learn so much Skill, as it will not be difficult for him to extract such volatile Spirits from other Metals also.

The way of preparing the volatile Spirits of Metals.

Recipe of the Steel Wyars, which the Needlemakers cannot use, one Pound, which so heat in the Fire, as all squallidness and filth may be burned away. Afterward put them into a glass Body, and pour on them of the hereafter described dissolving Water 4, or 5, Pound. Place the Vessel in *Balneo* or in Sand, and administer Fire so to it, as the Water in the Glass surrounding the Steel may wax hot and not boil; then the Water preys upon the Iron to be dissolved. For in this Operation the Steel is dissolved, and fermented like new Beer or Wine. In this Fermentation a certain most subtil Spirit of *Mars* ascends, without any corrosive, breathing a very strong Odour, and endued with a Taste vehemently penetrating. For such a Spirit so penetrates the Tongue, as the taste long remains, although a Man wash his mouth, yet this taste is not unpleasant. By penetrating the Body

of him that takes it down, it provokes Sweat copiously, opens obstructions of the Liver, Spleen and Lungs, and comforts the vital Spirits and Stomach. Also it is admirably conducent to the Health of those, who are accustomed to drink Wine mixt with Water; because it gives the Wine a gratefull Taste, and that far better, than the best of sowrish Springs are able to perform. If any one knows how to fortifie, or concentrate this Spirit by Rectification, he will be able to effect wonders by the benefit of it; which indeed yields not to be so readily concentrated, as Spirit of Wine: as you shall hear anon, yet it is possible.

The Water is prepared in this manner.

Recipe of common Salt one Pound, which dissolve in 4, or 5 Pound of common Water, and pour upon it half a Pound of Oil of Vitriol, to which superadd some Steel-wyar, and thence by distilling separate the Water; then no sharp Spirits will ascend with the Water, but all the corrosive will remain with the *Mars*, and nothing ascend but a subtil Spirit void of Corrosion. This moveth admiration, that of such an hard and fixed Metal, with the help of so gentle heat, should ascend such a flying and penetrating Spirit. But it is more to be admired, that this white, volatile and penetrating Spirit, in a few hours space, is able to turn it self into a fixed red Tincture: yet you will find this incredible Miracle verified, thus.

Fill a glass Body above half full with our Spirit of *Mars*, yet take no more of it than 5 or 6 Pound, because that would be more than is needfull for Probation. Place the Body, with its Head luted well in Sand, and distil off almost the Water by Ascent, so as onely half a Pound may be left remaining in the bottom. Take what ascends out of the Receiver, and

you will find it endewed with little more taste than Rain-water; and that because the volatile Spirit in this Abstraction or Decoction is separated from the Water, and again converted into a fixed Body, *viz.* A most red Powder. Which red Powder is indeed a true Tincture, yet it hath no ingress into Metals, unless that be procured to it by the help of Gold. Hence is fulfilled the Precept of Philosophers thus teaching: Make the fixed volatile, and render the volatile fixed. What, I pray, is more fixed than Iron? What more volatile than its Spirit? And lastly, what more constant in Fire, than the Spirit again fixed into a red Tincture?

Note: Whensoever the Glass with the remaining Water, in which the red Powder is, shall by motion be disturbed, the Water will seem to be blew, which blew colour ariseth onely from the Tincture, which by that agitation is dissipated into most small Atoms. For when the Tincture red as Blood is again setled in the bottom, the Water stands above it white as before. Touching this flaming Sulphur *Cosmopolita* thus speaks: *When Philosophers have freed their Sulphur from his tenebrous Prison, and see him swimming in his own Sea, they adore him, that is, are delighted with his Beauty*. But whosoever would operate any thing to purpose, it will be expedient for him to provide in readiness a good quantity of this Water, because from ten pound of this Water, there is no more than one Scruple of our Sulphur to be expected. Which *Avicen*, in his advice to his Son observed, saying, he had need to procure to himself sixty pounds of that Water before he began his Work. Touching which also *Bracescus* hath excellently discoursed, although he was [seemingly] refuted by *Tauladanus*, who (by reason of the great subtilty of his Wit) could not conceive, that any good could lie

hid in despicable gross Iron. But that good Man *Tauladanus* no more understood the meaning of *Bracescus* than he knew the nature of Iron. If any one be seised with the desire of operating in this Subject, let him reade *Bracescus*, by whom he will be sufficiently informed. But many by his Writings have erred, through their mistake of what he mentions in the latter end of his Book, *viz.* that he spake not of vulgar Iron, which by strong Fire might be again reduced into Iron; but that such Iron was to be chosen, as by the force of strong Fire, could turn it self into a green or blewish Glass. Where the simple Readers following the bare letter, sought their Tincture in common Scales of Iron, but to no purpose. Here I speak of a blew or green *Scoria*, which can no more be reduced into Iron. For whensoever any one shall melt our fixed Sulphur mixt with *Borax*, although with most vehement Fire, yet he shall never reduce it into Iron, but into a greenish Glass. This *Crocus Martis* cannot do, nor any other destroyed Iron; but in Reduction it will always yield some small Grains of Iron, wherefore thence no Tincture can be made. For whatsoever is endewed with a tinging Vertue must not be Metal, according to the Universal Consent of all Philosophers. If any one would find out some excellent thing, let him learn the Art of concentrating that, by which Concentration it will be multiplied in vertue.

These few things I was willing at this time to communicate touching the volatile Spirit, and fixed Sulphur of *Mars*, for publick good. The whole work is neither difficult nor chargeable, because we may use one and the same *Menstruum* always again and again, nor is there need of new Expences, which are now easily acquirable. These are things accurately to be noted, according as that most ingenious Poet *Virgil*

hath perspicuously hinted in these Verses.

Consider first, what here is to be done:
A Golden Branch*, with Leaves of Gold thereon,*
Upon a Tree concealed groweth: This
To the Infernal Juno *sacred is.*
But the whole Grove, with dismal shades of Night,
Obscure and keep this Tree *from humane Sight;*
And till some one shall take down from the Tree
This Golden Branch*, there can no Entrance be*
Into Earths Caverns. Beauteous Proserpine
Ordained hath that this rare Gift divine
Shall brought be unto her. No sooner is
The first Branch *cropt, but in the place of this*
A second sprouts; and that most pure and fine,
As did the first, with golden Leaves will shine.
Therefore distinguish Right; when rightly known
This Branch *is unto thee, then with thy own*
Hands crop the same: for it will follow Thee,
If thou, by Fates*, for this Work chosen be;*
If otherwise, no humane Violence,
Nor strength of Iron force it can from thence.

By these it evidently appears, that when one golden Bough is cropped off that Tree, another follows; and not onely one and another, but as often as you will crop one, another follows: Provided the Heavens favour our Enterprize; otherwise all endeavour will be vain. Yea, it will be impossible with hard Iron, or from hard Iron (as the Gold-bearing Tree) to acquire or crop one Branch. Consider these things in your Mind. For here are words plain and clear enough to every man, whose Ears and Eyes GOD shall open.

CHAP. XIV.

Of the Preparation of the volatile and subtil Spirits of other Metals, and of their Use.

Note: This labour of preparing subtil Spirits of fixed Metals, and of reducing volatile Spirits, into fixed Bodies, so fully explains the Table of *Hermes*, as even Children may understand it. Also it proves the verity of that Aphorism unanimously used by all Philosophers: The fixed make volatile, and the volatile fixed. He, whom GOD favours, will easily understand this; but to all others it will remain most firmly locked, although it be described to them with great clearness. I doubt not, but that this Work (when these my Writings in time to come shall fall into the hands of most diligent Searchers) will be more throughly sought into, and a nearer way found, than this here described by me, by the benefit of which, the Sulphur of Philosophers may be released out of that dark Prison, in which he is kept bound with most strong Iron Chains. It would amaze a man to think, that from such a tenebrous and shadowed black Tree, such fair golden Branches should be cropped. Although they (who are not Philosophers, but would be accounted such, whilst they walk magnificently adorned with splendid cloathing) by reason of their blind Pride cannot see what I have here clearly written; yet those Artificers, who wearing Linnen Frocks, labour in their simplicity, will see; because to their Endeavours GOD gives his Benediction.

As I have here taught the way of extracting penetrating volatile Spirits from contemptible old Iron, and of reducing those Spirits into fixed tinging Bodies; so also from other Metals the same may be prepared. Indeed one Metal is more apt for such an Operation than another, and one gives forth its

spirits more readily than another: yet such Spirits may be extracted from all Metals, but with the help of divers Solutions. For that Water which dissolves Gold, leaves Silver undissolved, and what will dissolve Silver, dissolves not Gold. Common Salt, and Salt Niter, with the Water and Oil of Vitriol, (but rather of Sulphur) dissolve *Sol*, *Mars*, *Venus* and *Jupiter*. Niter the Water and Oil of Sulphur dissolve *Lune* and *Venus*. Most sharp Wine Vinegar dissolveth *Saturn*. The Spirit of Gold coagulates *Mercury* into *Sol*, the Spirit of Silver coagulates it into *Lune*. Both these Spirits are Medicinal. The Spirits of *Venus* and *Jupiter* are of a loathsome Taste and Odour, and therefore unfit for Medicine. Spirit of *Saturn* is a mere penetrating Venome, or a Water, which by its Odour suffocates the vital Spirit, wherefore every man should studiously avoid it, since its use cannot be without Peril; otherwise that Spirit in metallick Works excels all. Nor do I believe we can easily prepare a Tincture, whereby to coagulate *Mercury*, unless by the help of Saturn cold and killing all living things, yet it must be warily handled.

With these I close up my discourse of these Spirits; because, although of them much more might be spoken, yet it will not be the part of a considerate man to cast Pearls before Swine. Besides, I judge I have already divulged more than is fit. But it is worthy of all observation, that GOD is a faithfull Defender and Governour of all most subtil Arts and Things.

CHAP. XV.

How by the Benefit of a Magnet from the Air may be extracted an Universal Medicine.

It is sufficiently known, that the Life of all things is

reconded in the Air, without which Spirit, or Soul of the World, nothing in this Universality of things can live or grow. But the Ancient Philosophers sought out various ways, by which that Spirit might be brought from a far off nigh unto us, be received and exhibited palpable, and at length they found the way, and by the benefit of it performed great things both in Medicine and in Alchymy, and that more or less, according as one knew better than another how to intercept and concentrate it. For the whole Art consists in this Concentration. Therefore, since by the Grace of GOD, unto me also is something known touching a like Concentration of the Universal Macrocosmick Spirit of Life, I was not willing (like some envious or covetous man) to keep so great a Gift of GOD to my self onely, and suffer the same to be buried with me; but chose rather (for the health of mankind, for the profit of my Neighbour, and for the Honour and Glory of GOD) to impart something thereabout; yet no more than is fit or convenient.

If any one desireth to extract some good thing from the Air, he must first well understand what will be a good Magnet, and how to make choice of an oportune place and time. For in a moist Season, you shall extract nothing but an unprofitable Water from the Air. Wherefore no man should undertake this labour of extracting, unless in the height or midst of Summer, when the Air is very serene, void of Clouds, and hot with the Solar Rays. Because, at such a time, the Magnet, which you shall hang up in the Sun, immediately (from the hot Rays of the Sun) extracts a medicinal Water, which every one may use according to his Capacity. Also, I would have you to know, that various Magnets are found, by help of which Water may be extracted from the hot Air, but all such Waters make not for our Universal Medicine.

Yet I am willing here to subjoin some of those vulgar Magnets.

The First Magnet.

With 3, 4, or 6 Pound of *Mercury*, or more or less fill small Stone Jugs, or strong Glasses, which Glasses firmly closed let down into a deep cold Well, where the *Mercury* in it self will concentrate the Cold. Now, if you would extract Water from the Air, hang up such a cold Glass or Jug full of *Mercury* in the Air, where it will presently draw Water to it self. Therefore under the Glass or Jug must be set a Glass Tunnel with a long Pipe; by which the distilling Water may be received, and conveighed through the Pipe, from the hot Sun into a cold Cellar. If this be not done, the Sun will again draw to it self the distilled Spirit. You may leave the Magnet hanging as long as it remains cold and Water distils from it: But assoon as no more water will distil, you must immerge it again in a Cold Well, that it may recover its Coldness. In the mean while, instead of it hang up another; and repeat the labour so often as until you have gathered water enough.

Another Magnet.

Hang up in the hot Sun Jugs or Glasses full of such water; which of their own accord will their contract so great Coldness, as you can scarcely endure to touch them with your hand. To them, as is abovesaid, water will adhere, and distil into the Tunnels set under them.

A Cold water is thus prepared. In common water, or Spirit of Vitriol, dissolve of *Sal. Armoniack* and Salt-peter equal parts, as much as can be dissolved. With this water fill your Glasses, and with them, as is

above shewed, extract water from the Air; and that will be equal in vertue to the former. If you be desirous to extract something more excellent from the Air, you must also expose to it more excellent Magnets. For as is the Magnet so it extracts.

CHAP. XVI.

Proceed in your Work thus.

Prepare 3 or 4 Pound of Oil of Sulphur *per* Campane, which rectifie, that it may become very fiery: Then provide a large Trough like a Chest or Box, which you may cover with linnen Cloath so, as through it no Dust, but the Air onely may penetrate. In this Chest set your rectified Oil of Sulphur, poured into divers small Pans or Dishes so as they be not above half full. Leave these there three or four Days, or so long Day and Night expose them to the Air, as until the Oil of Sulphur hath drawn to it self so much Water as it self was, and filled the Dishes. This being done, empty out all the Dishes into one Glass Body, and in *Balneo* with gentle heat abstract thence all the humidity. The Oil remaining in the Bottome again expose to the Air in those Dishes, as before, so long as until they be filled. That water again abstract thence, and proceed in extracting so long, as until you have got water enough. This water passeth through all Tinctures; but I have not as yet compleated this Work.

Note: All the best of that, which this Magnet draws from the Air, remains with the Magnet it self or Oil of Sulphur, as its true *Matrix*, in which it is nourished and ripened; as the most Ancient *Hermes*, or the Father of all Philosophers, in his Smaragdine Table, hath described in these words. Here the Soul of the

World speaks. My Father is *Sol*; my Mother is *Luna*; the Wind or Air secretly bears me in its Belly: the Earth conceived and brought me forth, and is my Nurse, *&c.* The Spirit of the World can bring forth no Fruits, unless it be first seminated in a fit *Matrix*; because nothing in the World can be progenited without a Womb. This our Magnet is of all Magnets most gratefull to the Soul of the World, and a most natural Friend to the Spirit of the World.

Much might be spoken touching this, but it is not necessary to thrust pulse ready chewed into a sluggish Crows mouth, let him fly out and seek for himself. Here, in this Work are verified those sayings of Philosophers: Nature rejoyceth in Nature, Nature overcomes Nature, Nature retains Nature. Here it is proper also to observe, what *Hermes*, at the end of his Table saith; *viz.* My power is not intire, or perfect, before I am turned into Earth. But how this is to be done, I leave to the consideration of every Man. For the unworthiness of the present wicked World forbids me to discourse more amply thereof. To all men, whom GOD shall favour, these will be clear enough. Yet elsewhere touching this matter (if GOD will) ere long shall be taught.

CHAP. XVII.

How from Gold its Tincture may be extracted by help of a Magnet.

Recipe of most pure Gold an ounce and a half, and of the *Stellate Regulus* of Antimony made with Steel, one ounce, both which melt together in a covered Crucible; and whilst in flux cast at times a little Saltpeter, until the Niter shall have extracted all the *Regulus* of Antimony from the Gold, and turned it into *Scoria's*. Permit the whole to flow well for some

time, that the Gold may well settle to the bottom from the *Scoria*, which will flow like water. Then pour all out into a Cone, where the Gold becomes a *Regulus*, which must be separated from the *Scorias*. This *Regulus* of *Sol* comes forth much paler than it was before. If this pallid *Sol* be again melted with the aforesaid Martial *Regulus*, and the *Regulus* thence abstracted by the help of salt Niter, the Gold will come forth a little paler than it did the first time. If you repeat this Operation 8, 10, or 12 times, you will find your Gold at length almost totally white, and that its Tincture is extracted from it by the help of that *Regulus*. The Tincture of *Sol* is absconded in the *Scorias*; this, by the benefit of a certain Antipathetick Salt, will be precipitated from the Fæces liquified, like a *Regulus* highly tinged.

Note: Yet in these Cases, the Precipitation must be warily handled, lest you also precipitate the *Regulus* [of Antimony] together with it, and so vitiate the Tincture. For this Extraction no vulgar *Regulus* is conducent, but such onely, as is made of good Steel, and hath such a property, as when a Flint is strook upon it, it yields fiery Sparks, no otherwise, than as from hardned Steel. Which vertue, if it hath not, it cannot rightly draw to it self the Tincture of Gold, but all endeavour will be in vain. This Extraction, *Cosmopolita*, in his new Chymical Light, hath very well described and discovered in these words. Such *Chalibs* must be taken, as is endewed with power of extracting that from the Rays of the Sun, which many have sought, but few found. But further he saith: There is found yet another *Chalibs*, which from Gold extracts its Seed (if it be united or copulate with it 12 times) and thence is impregnated; but the Gold is infirmed even to death. But the *Chalybs* or Magnet brings forth a Son, which will be more

excellent than his Father, *viz.* Gold, whence he proceeded, whosoever knows this Magnet (of which *Cosmopolita* makes mention, and an hint of the preparation whereof I have here shewed) and understands how to use the same, in two or three Days he will behold and find so great things, as with the joy thereof his heart will be satisfied. For, if any one hath Philosophick Eyes, he will see what is most pleasing, if not, he will be no more delighted than a Swine, who among the Sweepings of Vineyards hath swallowed an inestimable Pearl or Jewel, but knows not the difference between a Pearl and that Dung.

CHAP. XVIII.

How from Gold its Tincture may be extracted by another Method, or by the benefit of a certain other Chalybs.

First, prepare the Green Lyon of Ancient Philosophers (by help of my mineral Salt) of sulphureous Subjects. To this Green Lyon cast *Sol*, that is, pure Gold; which he, through his greedy desire of devouring always, will swallow, and thereby acquire to himself notable Strength, Power and Beauty. For his whole Body will be thence renewed. His head, with the fore part of his Body will shine with a Grayish Hair, very like a Crows Head; but his Tail with the hinder part of his Body will acquire many various and beautifull Colours, resembling the genuine form of the Rain-Bow, or the Tail of a Peacock. And as soon as the Green Lion hath sufficiently concocted and digested the yellow Lion or *Sol* in his Stomach, he by Seidge expells the Residue, which will be void of Colour or Bloud. Then the Lion, proud and adorned with various and beautifull Colours, walks to the Waters, in which he immergeth himself, and washeth away

all his Colours, and becomes totally white like a Swan, which white Swan the Cook roasteth at the Fire: where that white Swan first waxeth yellow, then more and more Red, untill he is able at length to bear the Fire, and, like a Salamander, live in it without any peril or hurt. This Red Salamander is one of the most noble Medicaments that can be prepared by Art. This Operation I performed but once; and then unto me appeared all those Colours one after another, untill I obtained a Red Salamander, which is a most present Remedy against all Diseases. But what it is able to effect in Chymistry, as yet I have not known, being onely content with a Medicine for Health.

CHAP. XIX.

Yet another way of extracting the Tincture from Gold.

Recipe of our dried Red Bloud of *Sol*, in the form of Powder irreducible one ounce, or an ounce an half of our Sulphureous fixed *Sal-mirabile* five, six or seven ounces. Both which mixt together put into a strong Crucible; which covered, set into a Wind-Furnace, giving Fire so, as they may flow together like Water for the space of half an hour afterward pour them out into some Iron Vessel, or Cone, when the *Sal-mirabile* hath drawn from the Tincture of Gold a Bloudy Colour. The Mixture cooled, separate the Red *Scorias* from the *Regulus*, which will be white as *Lune*. Pulverise the Red *Scoria*, or tinged *Sal-mirabile*, upon which pour common Water; this Water dissolves the *Sal-mirabile*, not indeed tinged with a Red, but greenish Colour. Filter the Solution, and evaporate the unprofitable Water in a Glass-dish. Then in the bottom will remain a Red Salt, which fortified with the Seal of *Hermes* or Luting of *Sapience*, keep for a

sufficient time in a continual Fire of Coals: for then the Sulphur, as yet immature, will fix it self with the *Sol*, and become constant in Fire. From that Lute of *Sapience*, you may afterward (by the help of a proper Magnet) abstract a fixed Tincture, and convert the same to Medicinal use.

Note: That green Saline Water, in which the Redness is latent, coagulates *Mercury* into *Sol*, not indeed for wealthy profit, but onely by the benefit of that to know the possibility of such a Work. The Red slime, whence the Salt is extracted by the benefit of common Water, must be taken out of the Filter, mixed with new *Sal-mirabile*, and in a strong Crucible be made to flow well for half an hour. Then also more Tincture will be extracted, and a white *Regulus* of *Sol* again settle to the bottom. If this labour be a third time repeated, the Tincture will be good, and a white *Regulus* will again settle, yet not so much, as was the first and second time.

CHAP. XX.

How by the benefit of a certain Metallick Salt, from Venus *her Son* Cupid*, or rather the true* Mercury *of Philosophers, may be prepared in the space of One Day, so, as to sustain the Trial of a Cupel: and indeed, it is neither* Sol *nor* Lune*, but a Tincture most ample for certain white Subjects.*

As for the Method of Proceeding, I have willingly offered to the Sons of Art occasion of understanding That: but the thing it self is of so easie Operation, as even the Forgers of infamous Libels, and all the Brethren of Ignorance, would understand and perform the same, if any One in describing it should give them but a very little Light. It would be an unadvised thing to cast so noble a Pearl before

Swine. Wherefore I must forbear to write fundamentally of it. Nevertheless, that the World may know such a Tincture is in the Nature of things, and may be prepared of Things of small value; I confess I thought it worth while to discover something thereof.

Recipe of irreducible fixed *Arsenick*, and of *Mercury* of *Luna*, of each eight ounces. Both which Species being diligently mixed, you will have a famous Cementing Powder, by help of which you may perfect this *Arcanum*, thus:

Recipe of Plates of *Venus* beat thin and cut small four ounces, which, with the Cementing Powder above mentioned, (making Lay upon Lay, as the manner is) into a Cementing Box glazed within, the Cover of which you must lute very well, and place that in a Cementatory Furnace; or (if you have not such a Furnace) upon a Chimney Hearth, putting so many Coals round about, as the Box may be covered well. Kindle the Fire above, and heat the Box leisurely, and keep it there red-hot among the Coals ten or twelve hours. Then let your Fire go out, and the Box cool: out of which, if you take your Cement, you will find, that the Volatile Spirits of *Luna*, taking the fixed *Arsenick* to themselves, have introduced the same into the Copper Plates, and procured to it the whiteness of Silver. This Cement, together with the Copper Plates mixed with salt Alcali or burnt Tartar, melt in a strong Crucible in a Wind-Furnace, and pour out the Mixture into a Cone. When cold, separate the *Scorias* from the *Regulus*, which will be white as *Lune*. Cupellate this white *Venus* with *Saturn*; then that, which is not *Lune*, will enter with *Saturn* into the Cupel, but the fixed *Mercury* remain above upon the Cupel. Granulate that, and dissolve it

by the help of *Aqua-fortis*; then indeed the *Luna* will dissolve, but the Philosophick *Sol*, or rather *Mercury* of Philosophers, will remain in the bottom undissolved, like an Ash-coloured Calx. This edulcorated and reduced, passeth into an heavy Metallick Body; in Face, Colour, and Hardness very like common and known Lead, which by *Spagyrists* is called the *Black Lead of Philosophers*. This Black Lead hath sustained the Examen of the Cupel, yet it is neither *Sol* nor *Lune*. For if it had been *Lune*, the *Aquafortis* would have dissolved it; and if it had been vulgar *Sol*, it would have been infected with no Lead colour. Nor can it be Copper or Arsenick; because if it had been so, it could not have sustained the Trial of the Cupel. Therefore, according to the Fables of Poets, it must be *Cupid*, or the Son of *Venm*. When the Gods saw that *Vulcan*, or the Son of *Jupiter* and *Juno*, was born so very black and deformed, they took care to have him carried into the Isle of *Lemnos*, that there being washed by Apes (that is, by Men or Philosophers imitating Nature) he might obtain a better Form, be nourished and brought up to Man's estate. Who afterward married *Venus*, of whom he begat *Apollo*. Whosoever desires farther Information touching this matter, let him read that Ingenious Treatise of *John Bracescus*, of the Tree of Life; where many great *Arcanums* are revealed, and the obscure Writings of Poets and Ancient Philosophers explained.

Here I have in few words divulged one of the greatest of *Arcanums*. I have not my self, as yet, by trial adhibited this *Mercury* of Philosophers, for the Transmutation of Metals. Nevertheless, as I have written, it is a very far extended Tincture for white Bodies, and this I have several times experienced; yet onely in white Glass: where one part of the Tincture

tingeth one thousand parts with the redness of a Ruby, but the Glass keeps its own hardness. Now, if it could obtain the hardness of a Ruby, as well as its fair Colour, such a Tincture would be full as good, as if it could tinge *Lune* it self, or *Mercury* into *Sol*. For a good Ruby weighing but one ounce, is more esteemed than sixteen ounces or a pound of Gold. But this Glass, with how great Beauty soever it is tinged, still remains Glass, and cannot otherwise be used than to adorn certain Pictures and Images.

Note: If any one knows how to extract the Tincture from this coloured Glass, they will obtain a most excellent Universal Medicine. For, although this *Mercury* of Philosophers hath once passed the Trial of the Cupel, yet this happened onely by help of the Silver, which defended it from devouring *Saturn*; otherwise it had been consumed by it. But now it is separated by help of *Aquafortis* from the *Luna*, it is destitute of a Defender, and is constrained to enter again into its Mothers Womb, that it may there be ripened, and afterward new born. For all Sand or Flint, of which Glass is made, is the Matrix or Mother of all Metals. Glass is the Philosophers Lute of *Sapience*, or Seal of *Hermes*, with which all Volatile Mineral Subjects are so bound and fixed, as they can abide fixed, sustaining the force of Fire.

CHAP. XXI.

How, by the benefit of the Common Lute of Sapience*,* Sulphur*,* Antimony*,* Arsenick*,* Auripigment*, and the* Sulphur *of Vegetables, may in a short time be fixed into fixed Medicaments.*

Recipe any one of those Subjects, which you will; which if you dissolve either by the dry or humid way, in a sharp *Lixivium*, the *Lixivium* so far

constringeth the Volatile Subject, as it will not, when heat red-hot continually evaporate. Such a *Lixivium* coagulate into Salt: If of this Salt you mix four or five parts, with one part of a liquable Flint or Sand, and put the Mixture into a Cementing Box well luted; set that into a Furnace of Cementation or Fixation to be fixed, the *Sal-Alcali* preys upon the Flint, and with it is converted into Glass. But the Volatile Mineral hides it self in this Glass, and is not driven thence by the violence of Fire, but suffers it self to be fixed into a fixed Tincture. After that, which was put in, shall be fixed, take your Box out of the Furnace or Fixation, and make the Glass flow well in a Wind-Furnace. This Glass, when poured out, will be Red in Colour. If you reduce this Glass to Powder, and by the help of Spirit of Wine extract the fixed Tincture, from this fixed Subject, you will have a most efficacious Medicine against all grievous Diseases, especially, if the Tincture hath been extracted from Antimony, or Common Mineral (not Vegetable) Sulphur. The Tinctures of Arsenick and Auripigment, are not so safe to be used in Medicine, but in Chymistry they are more profitable. For such Subjects cannot be fixed by any more easie Method, than is here discovered by me. And *Paracelsus*, *Basilius* and other Philosophers judge, that a Tincture drawn from fixed Sulphur or Antimony, will be admirably efficacious in Medicine and Chymistry.

But that I so abruptly break off this discourse, it is not without Reason, for I am confident I have writ plain enough to him whom GOD favours.

Note: If to your *Hermes Seal*, you add such Sand or Flints, as *per se* abound with the first Ens of Gold, you will acquire the more noble Tinctures.

CHAP. XXII.

How to prepare a famous Universal Medicine of Gold.

Recipe three or four Ounces of the coagulated and irreducible Bloud of the Lion; of which the little Book of Dialogues treats. Dissolve them, in the dry way, by the help of *Sal-mirabile*, into a Red Stone; from which reduced to Powder, extract its Tincture, by the help of Alcolizate Spirit of Wine. This Tincture is a famous *Aurum Potabile* against many Diseases. Also it coagulates living *Mercury* into *Sol*. I purposed to have prepared no small quantity of this *Aurum Potabile*, that I might therewith help and succour the Distress of the Diseased. But I was hindred for two years, so as I could not attend this Operation. Now I have found an easier Method of preparing it, and by help of that, do hope hereafter I shall do more than I could doe before. Touching its salutary use in Medicine, and its Coagulation of *Mercury*, shall (if GOD will) be treated of hereafter, before it be long. Here the Description of that would be too tedious.

CHAP. XXIII.

How a Medicinal Water may be Distilled from Jupiter *and* Mercury*, by the benefit of Fulmination, or a sudden Flaming Fire.*

Make an *Amalgama* of Tin and Mercury in equal weights: Mix this *Amalgama* with Sulphur, Tartar and Nitre mixt in equal parts, and Grind them exactly upon a Stone, and then your Matter, with its Fulmen, is fit for Distillation. Therefore, when you purpose to distill a Medicinal Water from *Jupiter* and *Mercury*, begin your Operation thus.

Against some Wall, set up five or six Glass Cucurbits, [or Subliming-Pots of Earth glazed within] one above another, so as they may exactly shut in

one into another, and let the Junctures be firmly closed with Paper and Starch, as I taught to be done in preparing Spirit of Salt. The lowest Glass must have an Orifice in the side, into which the neck of the Distillatory Vessel may be inserted. Which Vessel must be made in form of a Box or Cabinet round, a span broad and high; in the upper part thereof, which is to be filled with Sand, the Cover may be included in such wise, as I taught in the Second Part of my Philosophical Furnaces; yet below it must not be round, but plain; so as standing out from some Bench it may be fitted to the Receivers. When all Junctures of the Receivers shall be closed exactly, your Furnace is compleat. Then, at one time put in no more of the Mixture into a Crucible set in that Furnace, than one Ounce. From this (when you have kindled it with a live Coal, and nimbly put on the Cover again) will be excited a Fulmination, and flame suddenly penetrating, and with great noise separating the Mercury from the Tin; in which separation, part of the *Jupiter* and *Mercury* ascends in the form of a sowerish Water, but another part in the Species of a subtile yellow Powder. When this Fulmination ceaseth to fume, take out that Crucible, and put another in his place: set fire of the Mixture in that, and let it burn as before; and continue the same labour, taking out and putting in, as long as any of the Mixture is left. Then take the Water distilled, together with the Flores, out of the Recipients. That Water (when digested with gentle heat for a sufficient time) is coagulated into a Medicinal Red Salt. The Flores must be dried and fixed with fresh fulminating Matter, and as before sublimed. Then again will ascend Water and Flores. All the other Flores remain fixed in the Crucibles, which (reduced by force of Fire and diligent Fusion)

produce an hard Tin, which may be cupellated by the help of *Saturn*, but vulgar Tin cannot bear this Examen. This leaves somewhat behind it in the Crucible; yet not so much Gold as covetous Men desire; but so much as renders the Medicinal Red Salt acquirable without charge.

Ancient Poets, fabulizing touching this Work, have writ, that *Jupiter* and *Mercury* sought entertainment of *Philemon* and his Wife *Baucis*, as Persons contented with little, that from them they might receive Meat and Drink liberally. Let him, who desires a more ample Information of these things, peruse such Philosophers, that he may see how highly this Work was esteemed by them. For, as we now said, *Jupiter* and *Mercury* turn not into rich and proud Men, (who regard not Art, but thirst after heaps of Gold, by which they may long continue their Pride of life) but to the Lovers of Frugality onely, and into their House bring their own Blessing with them.

CHAP. XXIV.

The way of extracting an Universal Medicine from common and well-known Lead.

By Calcining reduce four pound of Common Lead to Ashes. With which four pound of Calx of Lead, mix four pound of those Stones or Sand, in which is contained the first Ens of Gold. Melt this Mixture in a strong Crucible into Glass: which reduced to Powder, mix with a fourth part of Salt of Tartar, and in an Iron Crucible reduce it, so you will recover almost all your Lead. This Lead again reduce to Ashes, and mix with it a fourth part of choice Sand and Flints, and melt the Mixture into Glass. Which again reduce by help of Salt of Tartar and Iron: again Calcine it, with Flints turn it into Glass, and reduce it as before; the

oftner the better. For in every Operation the Lead extracts something of the first Ens of Gold from the Sand or Flints, and at length becomes very rich with it. That afterward must, by the help of a certain Magnet, be extracted from the Lead, and converted to Medicinal use; as every Man, according to his capacity, is best able to use the same. I judge it not convenient to make a farther discovery touching this matter. Indeed the external face of this Process is simple; because in so short a time, with so little charge, and from so vile subjects, an Universal Medicine may be extracted. Although *Saturn* is covered with a deformed Ash-coloured Coat; yet within in his interior penetrals is reconded a golden Crown, which is not perceived before that grey Habit is taken off from him. As oft as any one hopes for, or thinks to obtain such a thing, let him read what *Basilius*, *Paracelsus*, and other Philosophers have writ touching Lead. Blessed is that Man, who knows how to adhibit to this Operation the Secret Lead of Philosophers instead of Common Lead: for then undoubtedly he will find a most excellent Medicine; according as Ancient Philosophers, by the following Words have expressed:

Arctus est Hominis, qui constat VI. Elementis,
Cui P. *si addideris,* S. *in* M. *mutare benè scis,*
Hoc erit Æs nostrum, constans Lapis
Philosophorum.

That *Arctus* is *LUMBUS*, before which word, if you set the Letter P, and change the last Letter S, into M, it will be *PLUMBUM*. Therefore if by the help of Common Lead, (which notwithstanding is very impure, and as it were Leprous) the possibility of Transmutation may be demonstrated and verified, as is manifest by my New Chymical Light, what may

not the Secret Lead of Philosophers effect, which is *per se* pure, and more excellent than Gold? *Cosmopolita* speaks thus: Although unto him, to whom GOD hath shewed the possibility of that, the Gain be not so great as the Loss, yet unto him is opened an Entrance to the knowledge and finding of all other high things. More of these at this time I forbear to speak. Whosoever is so gross and stupid, as he knows not how to enter through this Gate set wide open, how shall he be able to enter through a narrower passage? Him, to whom this clear Light cannot shew the way, neither the Light of *Sun* or *Moon* will profit any thing. Yet I doubt not, but that even Mechanick Artificers, so soon as that my Light begins to shine, will search out the Truth, unto every of whom I wish the help of GOD.

CHAP. XXV.

How Gold may be rendred Volatile, so as to be sublimed into a salutary Medicine.

Dissolve as much Common Salt in *Aq. Fortis* as you can, in this *Aq. Regia* dissolve Sol, which precipitate with Spirit of Urine. In Sand abstract all the Phlegm to a dry Salt; if afterward you augment the Fire, the Coagulated Spirit of Urine will carry up with it self part of the purest *Sol* in the form of a Red Salt. This Salt will yield very profitable Fruit in Medicine. The Dose is from three, six, eight, to twelve Grains; endued with power of expelling Sweat and Urine, and famously conducent against the Stone and Gout. Also since this Salt is void of any loathsome Taste, it may securely and commodiously be administred as a Cathartick to Infants, and Women with Child.

CHAP. XXVI.

The Way of preparing yet another famous Medicine Universal of Gold.

Dissolve one part of Nitre, in four parts of Spirit of Salt, diligently rectified. In this Water dissolve as much Gold as you will. Upon this Solution leisurely at times, and drop after drop, pour on of Oil of Tartar so long, as untill both those contrary Natures of the *Aq. Regia*, and Oil of Tartar, shall be united and quiet. Then, if you abstract all the Phlegm, with the *Sol* will remain a Salt. This Salt, with the Gold, put into a little coated glass Body; yet first mix with them of burnt Bone as much in weight, as the Salt and *Sol* did weigh. The Bones are onely added, that the Gold may not be separated from the Salt, or be precipitated into a Mass and flow. Place the Glass, with this mixture, in Sand, augmenting the Fire gradually, untill the Glass in the Sand be obscurely Red; in which degree of Fire, if you detain it the space of six hours, the fusible Salt will penetrate the hard Gold, and from it extract its best strength, and thence wax Red. Which, when all is cold, take out of the Glass, and by the help of Spirit of Wine extract from that Red Salt all its Tincture; which you may administer in grievous Diseases, according as your Judgment shall inform. If you reduce the extracted Gold by the help of Borax, you will find your Gold pale.

The Way of Extracting a yellow Tincture from white Nitre.

By Retort distill a strong Spirit from pure salt Nitre, mixt with burned Earth. Which Spirit, lest it should not be strong enough, dephlegmate. This Spirit in Distillation ascends Red, but when cold appeareth White; yet in it is absconded a Redness,

which will be revealed the following way. We see that if any thing fall from those, who labour about *Aqua Fortis*, into it (whether that fallen in be a piece of Skin, Hair, or any part of the Nails of the Fingers) the same is tinged thereby with a golden Colour. The reason of this Colouring is this: All superfluities of Nature (as the Skin, Nails of the Hands and Feet, all Hairs and Hoofs of Animals, and Feathers of Birds; which being old, fall off, and new succeed in their place) are endued with power of cleansing the Humane Body, whensoever they are prepared for Medicinal use; and that by reason of the abundance of Volatile Salt contained in them, and other such like Entities. For Volatile Salt is of such a Nature, as Salt of Urine, by which all corrosive Spirits are mortified and edulcorated. Hence it is, that when one drop of a Nitrous Spirit falls upon the Skin, or a Nail of the Finger, it is mortified and discovered by such a Volatile Salt as lay hid in it; which otherwise happens not in all other Subjects, which are void of such a Volatile Salt.

Now follows the Process.

Recipe of the Hairs either of a sound Man, or of any Animal, very well washed and cleansed from all filth, four ounces. Upon these pour of most strong and well rectified Spirit of Nitre, one pound, and the Spirit will totally dissolve the Hairs. Upon that Solution pour by degrees so much Oil of Tartar, as untill all the Spirits of Nitre be mortified and totally deprived of their Corrosive power. But you should not cease to pour on Oil of Tartar, untill the Spirit hath well acquired a Golden Colour. This being seen, filter the Solution through brown Paper, in which the Fæces will remain, which notwithstanding will scarcely weigh half a dram; because the Spirit of

Nitre hath almost dissolved all. If from this Liquor in a Glass-body set in *Balneo*, you abstract all the unprofitable Phlegm, in the bottom will remain a Red Salt; on which, if you pour good Spirit of Wine, some Fæces will again be left in the bottom, which you may cast away as unprofitable. Moreover, if one half of that Spirit of Wine be abstracted from the Tincture, a yellow Oil is acquired; which if you rub upon good Silver, that will look as yellow as if it were good Gold. If you shall take of this Tincture, although it is so Volatile, from three, six, nine, to twelve drops, it strongly expells Sweat and Urine, cures the Jaundies, yields relief in the Dropsie; in Feavers it provokes Sweat, and in the Pestilence or other Diseases, where Sweating is needfull. I attempted to fix this Tincture; but it was an Operation of no small time; therefore I was weary of proceeding, and absolving the Work begun. If any one be so patient as to fix this Tincture, he, after his Work is ended, will have whereof to rejoyce. Touching this Operation, Philosophers feigned the venomous Dragon to be a watchfull Keeper of the Golden Fleece; and that the same could not be taken away before the Dragon was brought to sleep by a Soporiferous Medicine, by which he should be rendred insensible and fixed. But undoubtedly some opinionative Men will say, that this yellow Tincture is acquired from the Hairs, Wool, or Feathers, rather than from the Nitre. The Opinion of such Men I thus refell. If any one dissolve Hairs, Wool, or Feathers, by the help of Spirits of Salt, Sulphur or Vitriol, he will acquire a white Solution: and if he mortifies the Spirit of Salt or Vitriol with Oil of Tartar, yet shall no yellowness appear, but all remain white. And such white Salt, which comes from the Spirits of Salt and Vitriol, hath also its use in Medicine. The reason of

that is especially, because Hairs in themselves contain a very Medicinal Salt, which cannot possibly any other way be obtained, than by dissolving with the help of *Aqua Fortis*, or of their re-mortification and reduction into Salt by the benefit of *Alcali's*.

After this manner from many Animals, by the help of Spirit of Nitre, may be extracted yellow Tinctures or Salts, which are very efficacious in Medicine.

Such Cast-skins of Serpents, as are commonly found in Fields, and among heaps of Stones, are famously Medicinal against Poysons, the Pestilence, and all other venomous Diseases.

The Teeth of Serpents, and Teeth of Mad Dogs and Wolves, have a Medicinal Efficacy against all venomous Bitings of Animals. Also they help the Stomach against all Feavers.

Scorpions, *May-Worms*, *Cantharides*, and such like venomous Insects, do all minister yellow Tinctures, or such Salts as may most profitably be administred in all grievous and venomous Diseases.

CHAP. XXVII.

What is to be judged of the Tincture of Corals.

When *Paracelsus* writ of the admirable Virtues of *Tincture of Corals*, which it manifests in the Expulsion of all grievous Diseases, he said, that very many famous Men endeavoured to perfect that Tincture; but an happy event or prosperous success of the same happened to few. Even so hath it hapned unto me, who have been a searcher of that Tincture above forty years. As to the external face, I could indeed variously extract a Tincture of Corals, but in Medicine it proved not as it seemed. Hence I

conjectured that was not the true Tincture of Corals, but that Tincture came from the *Menstruum*. Yet at length GOD shewed me some particular Feathers of Birds, which might be adapted to fixed Tinctures latent in Stones and stony Subjects, and by help of them the same be extracted from their gross Bodies, and exposed to publick view; yet among them all, three sorts of Feathers onely hold the Principal place.

I.

The black Feathers of Crows,

which are endued with power to elevate such Tinctures as love to ascend.

II.

The white Feathers of Pidgeons,

which, in a sort, contain in themselves the purest, and before (by their natural virtue) lightly volatile Tinctures, invade and carry them upwards with them.

III.

Eagles Feathers,

which rowse even the most fixed and heaviest Bodies, and thence extract the inmost or noblest part of them, and carry it upwards with themselves.

Yet these Eagle-Feathers are most commodiously used for extracting of fixed Tinctures from fixed Metals and Stones. For if they be applied to other very Volatile Subjects, they will carry up with themselves the whole mortified Body together with the Tincture. Therefore, whosoever would by the benefit of the Salt of these Feathers, or of the Salts of other Volatiles, perform some excellent Work, let him exactly learn the difference between one and the other. But since here I onely intend the Extraction of

the Tincture from Red Corals, there is no need of any other Feathers for that purpose, but of Pidgeons Feathers onely, because they will be sufficient for this Operation.

The Feathers or Wings are thus found and acquired.

Dissolve one pound of pure Silver in *Aqua Fortis*. If to this Solution you pour good Spirit of Salt, in which Common Salt is dissolved, all the *Luna* will be precipitated from the *Aq. Fortis* in the form of a white Calx. In which Precipitation the Silver acquires the aforesaid white Pidgeons Feathers from the Salt-water, and submergeth them, together with it self, in the bottom of the Vessel. In this Precipitation also the *Aqua Fortis* perisheth not, but passeth into good *Aqua Regia*. This white Calx of *Lune*, which I have otherwise called *Mercury* of *Lune*, if it be diligently edulcorated and dried; then are the Feathers prepared, by help of which I here teach how the Tincture of Corals is to be extracted.

Recipe one pound of Red Corals, grind them upon a Stone to a most subtile Powder; to which add as much of this white Silver Calx also pulverized. Put these together into a Glass-Retort, administring Fire by degrees, untill the Retort be red, whence (before it is red-hot) will ascend a reddish Water pleasantly sweet; out of one pound of Corals, about four or five ounces. Let this Water be dephlegmated in a small Glass-body, by gentle heat of *Balneo*, and the unprofitable Water separated from the Tincture; which every Man may safely use in Medicine according to his capacity and skill; because by virtue of it the Bloud is egregiously purged. Almost after the same manner, by help of these Feathers, a most efficacious Water of Pearls may be distilled from

fragments of Pearls, or in defect of them from Mother of Pearls.

Likewise, by their help, from a certain peculiar kind of white Talk, may be extracted a famous Cosmetick for whitening the black Skin.

Also otherwise by the help of these, from Vegetable and Animal, as well as from Mineral Subjects, many famous Medicaments may be extracted; all the Preparations of which, if any Man should take upon him to describe, he would above measure encrease the Volume of his Book: which is not my purpose now to do. Therefore with these already commemorated every well-meaning Man will hold himself content. Hereafter (if GOD please) we may discover more.

That which remains in the Retort take out, mix it with an equal weight of burned Tartar, and then by strong fire melt the Mixture. Then the *Lune* will precipitate it self into a *Regulus*, and the Corals, Pearls, or whatsoever you distilled by the help of that, will pass into *Scorias*. If you rightly know how to operate this, you will lose none of the Silver. But if you granulate the same, dissolve it in *Aquafortis*, and again precipitate it with Spirit of Salt, edulcorate and dry the Calx, you will have new Feathers, by the benefit of which you may sublime subtile Tinctures from Bodies. The reason why these Tinctures ascend so sweet, is, because the sharp Spirits of Salt, which the *Lune* detains with it self, adhere to the Corals and Pearls, and mortifie themselves with them, and upwards onely drive a sweet Essence.

Since I have said something of White Pidgeons Feathers, and also made mention, that many other such Feathers may be had, by which heavy Subjects may in like manner be elevated, and carried upward

with them; among which the Dark-coloured Feathers of the Eagle do easily obtain the priority; I thought it would be worth while to shew the way of Acquiring them here also; which thus take.

CHAP. XXVIII.

How a Medicine may be prepared of Sol *and* Luna *together.*

Recipe of Gold one ounce, and of Silver two ounces. Dissolve the *Sol* in *Aqua Regia*, and the *Lune* in *Aqua Fortis*. If you mix both Solutions together, one Metal will precipitate the other, and both settle to the bottom in the form of a Dark or Ash-coloured Calx. This Precipitate edulcorate and dry, and mix with the same half its own weight of our Eagles Feathers. Distil these in a Glass Retort with strong Fire: then will the Eagles Feathers take up with it self a white Water; in which, notwithstanding, is latent a red Tincture; but of an unpleasing Taste, and therefore not to be administred in medicinal Practice. Yet, if this fierce and horrible Water be mortified by the help of a *Lixivium* of Tartar, and afterward some white Glass broke small be melted in a Crucible with some such Salt, the Glass will be tinged by the Salt, with an eminent yellowness answerable to the Colour of Gold. That yellow Tincture may be extracted from the Glass, and used in Medicine; because it ariseth both from *Sol* and *Luna*, and therefore necessarily must be medicinal.

Note: That during the Distillation, the Glass vessel contracts divers Colours, partly red, and partly yellow; *viz.* as long as it stands in the Fire and is hot; but the Neck remaining out in the Air, continues white. Here is cause indeed of admiration, that by that mixture of divers Colours many and various

Figures are represented, as Mountains and Valleys, adorned with Rocks and Trees, so artificially, as they seem to be the Work of a Painter. Some such Glasses painted, both by Art and Nature, I gave to some of my curious and ingenious Friends; who I believe have them yet to show. These Glasses are tinged well and throughly; sometimes through their whole Body, and that so firmly, as even the strongest *Aqua Fortis* or *Aqua Regia*, or any Corrosives cannot take off those Colours. Which indeed is a most strange and admirable thing, that even vulgar and corporeal fixed *Sol* and *Luna* should be rendred so volatile, as to be able to enter into the compact Glass, and tinge the same. Spirits have great power, are void of ponderosity, and when they tinge, the vertue of them is discerned far: even as the Spirits of men and other Animals are void of all heaviness or weight; which we clearly discern by this, *viz.* that a man living, is much lighter than when he is dead.

Moreover, Spirits cannot onely render fixed *Luna* volatile, and reduce it into red Bodies as *Sol* and *Venus*, which without any hurt of their form, and without increase or diminution of their weight, they can totally tinge with whiteness; but also Spirits can render the most fixt and most compact Gold volatile, and induce it into compact *Lune*, whereby that shall be tinged with yellowness, which is a thing very wonderfull. But that Spirits can induce Tincture into Glass, without hurt or augmentation of its weight, deserves greater admiration; especially because it is the common Opinion of putatitious Philosophers, that in Glass are no pores, yet the contrary of their supposition is true. For if it were so, as they perswade themselves, which way I pray could Tinctures be introduced into them?

Note: That Spirits do not onely induce Metallick subtile Tinctures into compact Metals and Glasses; insomuch, as by the help of white Spirits, yellow *Sol*, without destruction of its form or species may totally be tinged with whiteness; and white *Lune* by the mediation of red Spirits, be totally tinged with yellowness, and white Glass with various Colours resembling the Beauty of Jems: but they also extract fixed Bodies from other fixed Metallick Bodies. As we see, as often as we cast any mixture of *Sol*, *Luna* and *Venus*, (melted into a Mass) into those Spirits; the same Spirits extract the *Luna* and *Venus* from the *Sol*, without corruption or destruction of its form, so as the *Sol*, although this separation is made, doth notwithstanding remain compact and massy. We have such Spirits as these in our Possession, and can render the same fit for our purpose.

As for all other Spirits, which are various; *viz.* 1. Are Cœlestial and Divine. 2. Terrestrial and Diabolick. 3. The Spirits of the four Elements; these excel the former in power: for they cannot onely pass through Doors that are shut, but also through the hardest Stones and Rocks, and there at pleasure sport and perpetrate wonderous things. As you may learn from those that labour in Mines of Metals, where such Spirits inhabit, and stoutly defend their Treasures of Gold and Silver, from such as come to spoil them of the same; wherefore they invade the Miners, strike them, pault them with Stones or Dirt, blast them with venomous Vapours, and oftentimes kill many of them at once. What wonderfull things they in these subterranean Mansions are able to effect, is more than sufficiently known. In the Mansfieldick Mountains of *Venus* or Copper, the Spirits paint all kind of Figures, especially of Fishes; some of which I my self have seen. About 100 years

since there was dug up a certain Image of *Venus* upon a black Fissile Stone, wherein *Luther* and the Electour of *Saxony* were so evidently expressed, as either of them might be seen kneeling before the Image of Christ crucified. Also another such Fissile Stone was thence dug up, in which was exactly figured *John Baptist* baptizing Christ in *Jordan*. But if our Spirits of Salt can induce Tinctures into the compact Bodies of Metals; and Elementary Spirits in their subterranean Habitations, can impress many and various Figures on Stones; what is that good Cœlestial Spirits shall not be able to effect? Did not these preserve the three Children in the *Babylonian* Fiery Furnace? Did not they bring *Peter* out of Prison; and the Prophet *Habacuck* to *Daniel* into the Lyon's Den? Are not they able to bring in, and lead out? Cannot they render fixed palpable Bodies volatile, spiritual and invisible, and on the contrary render invisible Bodies visible and tangible?

Many things might here be spoken touching the Nature, Property and Difference of Spirits, but that they are not pertinent to our present purpose. If GOD permit, according as I have purposed, I shall ere long set forth a peculiar Treatise of Spirits. Here we have heard how Spirits can bring through shut Doors hard Bodies, and there render them corporeal and visible. Which may serve for Information to every Searcher into the Light of Nature.

CHAP. XXIX.

Yet one other Specimen *of Probation by the help of Eagles Feathers.*

That Artificer *Lazarus Ercker*, most famous for finding out the Veins of Metals, in his Book of Probations (or of finding out Veins) relates, that the *Venetians* hired

certain men for wages, and sent them into *Germany* to gather of the glassy dark coloured Grains of Sand of the Rivers running by the Mountains, and to transport it to *Venice*. The same is done at this very day. And although this Exportation is prohibited by Law, yet they desist not, but clandestinely proceed. The common People of those parts perswade themselves, that Grains of Gold are contained in those Sands, and therefore by Edict every man is forbid, either to remove it thence, or to convert the same to his own use.

Indeed *Lazarus Ercker* added, that he had subjected such Grains of Sand to various Trials, but never found Gold in them; yet that he also understood, that the *Venetian* Artificers prepared of that Sand such beautifull Colours, as with them were in more esteem, than Gold it self. But I affirm, that *Erckerus* did not rightly know those Grains of Sand. For indeed there is little corporal Gold in them, but much spiritual Gold. If to those Sands the Eagles Feathers be added, they will carry upwards with themselves much spiritual Gold, which will be very conducent in Medicine. Such Grains are found in all the Sands of Rivers in all Regions of the World, and in the Gravel on the Shores of common Navigable Rivers: whence much good may be gained. Now these may suffice to be spoken touching the Eagles Feathers, for it is not convenient to divulge more.

CHAP. XXX.

Yet one Royal Medicine of Vulgar Gold.

Make one Ounce of Gold more or less, irreducible by the benefit of Salts. Then to such irreducible or unmeltable Gold, add as much by weight of the fixed Salt of the Eagles Feathers burnt. Put these into a

firmly coated Glass, and place the Glass in an Earthen Pan full of Sand; which Pan set in the Fire that it may be red hot. But after it hath stood in such a Degree of heat, for four or five hours, let it cool. Then take your fixed *Sol* out of the Glass, and it will be like white Chalk. This white *Sol* taken out of the Glass put into a good Crucible, upon which lute another, and then set it in a Wind Furnace, where having stood four or five hours, without any extream heat, let it cool. Then your Gold will be transmuted into a Tincture intensly red. Grind this red Salt to a most subtil Powder, and pour on Spirit of Wine to extract his Tincture. The tinged Spirit pour off, and pour on other, that it may also extract. Abstract the Spirit of Wine from the Tincture, and in the bottom a red Saline Liquor will remain, which is to be accounted a true *Aurum Potabile*: because it is not possible by any way whatsoever to extract any Gold from thence. This Operation begun, I once absolved without Errour; but many times afterward trying my Work, did not succeed so prosperously as at the first time. Yet I rather ascribe the Errour to my self, than to Art, plainly judging, that no other way more swift, more easie or more preparable, can be obtained a most readily profitable Tincture for diseased, humane and metallick Bodies. Yet I add this. If thou sufferest the common and now ductile *Sol* to be and remain Gold; and sparing labour and charge for making it irreducible, do onely make choice of such Stones for your Operation, such as without Charges you may get, and by nature partake of irreducible Gold. Then indeed you may much more easily find what you intend. For whatsoever Tinctures of a golden Disposition are incited in those Stones, they notwithstanding in this operation lose it, altogether wax white, and at length totally red again. Which

being beheld by me, I never saw in all my Life a more wonderfull Sight. Hence Philosophers have always said: Whosoever can so destroy vulgar *Sol*, as it can never be again reduced into *Sol*, he hath attained to a very great Mystery. Also they further say: Whosoever knows not how to make our *Sol* (which is vulgar *Sol* rendred irreducible, or such as hath not yet felt the force of Fire, and in Stones is by Nature irreducible) white, he also cannot make it red. But now that is done this way. Therefore you need not doubt that besides medicinal Remedies, some other Eminent Works may thence be made. Which I leave more deeply to be searched into by those, who are yet strong and able to endure labour. As for my own part, I esteem the Pleasures and Riches of this World to be worse than nothing; and seek onely Incorruptibles, which can neither be stolen by Thieves, nor gnawn by Moths and other Vermine, nor be destroyed by any force of the Elements.

An Admonition.

In this little Book, candid Reader, I have treated of many rare *Arcanums*, or Secrets not vulgar; and that very briefly. All I here write, I write from certain Experience, as to Medicine: far be it, that I should profess my self a Master in the Melioration of Metals, I had rather say with *Socrates*, *This one thing I know*, viz. *that I know nothing*. Indeed had I been a younger Man, I should scarcely have forborn to exercise my self in such an Operation; but my great Age having rendred me unfit for all Labours, and unable to do any thing, I may easily be excused, for I am as it were compelled to abstain from so great a Work.

Here in this Book I have treated of divers secret

Fires, yet not of all to me known, but of many of them: touching the best of them all (if GOD permit) the seventh Part of my *Spagyrical Pharmacopœa* shall treat. The wonderfull Vertues of which secret Fires is so far beyond belief, as they exceed all the Fires in this Enchyridion commemorated.

Quantum Lenta solent inter Viburna Cupressi.

I am amazed, as often as I call to mind, how immensly vertuous such fiery truly Stygian Spirits are, which are endued with a faculty of mortifying all Metals (although they be Bodies of greatest strength) and of carrying with them their immortal Souls, wheresoever they can. For they are endued with so great power, as nothing is able to defend it self from them. Yet besides these there are also other horrid Spirits made by Art, which do not onely after Mortification take from metallick Bodies their Soul; but also are endued with so great power, as they take away the Body with the Soul. Spirits of this kind are not usefull for our necessities, but those Spirits which do onely mortifie the Body, and draw forth from it its Soul, leaving the gross Body. If these Bodies were as conducive to us as Spirits, there would be no need to extract from them their most pure Spirits or Souls, to prepare our Medicine of them. Wherefore we, not without good reason, by the help of Artificial Distillation) extract the most clean Souls of Metals from their rude Bodies. For, by the benefit of Distillation, all Bodies of Vegetables, Animals and Minerals, are purified and subtilized. Which clean and subtil Spirits (when they are again reduced into fixed Bodies) must needs be better Bodies than all other vulgar Bodies, which never yet were Spirits. Therefore, the more fixed those Bodies are rendred, and the more those Spirits are subtilized, the more

pure and further powerfull Tinctures will be obtained from them. The like we understand by Elementary Spirits. These Spirits, by their proper Virtue, can so far extend themselves, as to become wholly invisible, and (if I may so speak) altogether pervisible: on the contrary, they can again concentrate themselves, and constringe themselves into a very narrow compass, and in such-wise assume visible Bodies, palpable and hard, as they please themselves. Although such Objects, in the Judgment of the Eyes, are accounted Bodies, yet in very deed they are not true Bodies, but are onely concentrated Spirits, which enjoy a perpetual power of extending themselves again into latitude, and of leaving their corporeal Form and Shape, and re-assuming their Spiritual Figure. But it is impossible that these extended Spirits should possess so great power, as they had before Extension. For Spirits extended are no other than Air and Wind. On the contrary, concentrated Spirits have incredible Fortitude, penetrate more swiftly, and are Bodies of very great potency. A common Body cannot penetrate into another, without hurt to it self; nor in that extend it self, because of its gross and hard Mass. Yet such a Body, as is made of a certain Spirit, can penetrate other Bodies, and amend the same, without destruction of their Form and Species. As for Example: If any one turns a fixed Metal into a subtile Spirit, and this Spirit again reduceth into a fixed Body; this Body will not be a common, compact, gross or mortified Body, like all other Metallick Bodies; but is a Body spiritual, living, penetrating and vivifying mortified Bodies; or is (as I may call it) a Corporeal Spirit, which can extend it self in Amplitude, and shew its potency an hundred or a thousand ways; according as all true Philosophers ascribe to their Universal Medicine or Tincture, that

it, in a very small quantity, is able to tinge or meliorate a great quantity of the more vile Bodies into Bodies most noble. Which admirable Correction is not as yet known to me; yet I certainly believe and judge, that such a Transmutation, or famous Emendation of Metals may be made, by the benefit of concentrated and fixed noble Metallick Spirits. Whosoever hath Time and Place convenient to set about this Work, may try what is possible to be performed by the help of Art. Convert fixed Bodies into subtile Spirits, and reduce volatile Spirits into fixed Bodies, then shall you obtain whatsoever you can desire or wish for.

Indeed I have Reasons enough to restrain my Quill from a farther promulgation of such high Matters; yet since I have proceeded farther in this discovery, than any Man before me ever did; what hinders but that I may to the Horse-man, to whom I have given a *Nisæan* [or excellent] Horse, give the Bridle also? Therefore it pleaseth me to reveal yet one kind of Spirits, which very lovingly receive the Souls of Metals (after their Bodies are mortified) and carry them up into the Philosophick Heaven, that is, into the *Alembick*. Which good Spirits are not horrible and cruel as the former, but sweet and amicable. Indeed, such good Spirits do all willingly associate themselves with the Souls of all Metals promiscuously, but onely with such most pure Souls, as are in *Sol* and *Luna*. But if they be compelled to be concerned in the Mortification of fœtid gross Metals, as *Mars* and *Venus*, or of venomous, and as yet immature and volatile Metals, as *Jupiter*, *Saturn* and *Mercury*, and to receive the out-passing Souls of them; they refuse not this office, yet from such fœtid Souls they contract a stink to themselves, and therefore can scarcely afterward be Medicinal.

Wherefore, it is better not to use these good and pure Spirits, unless for receiving the Souls of clean Metals; for then they remain good, and cannot be administred in Medicine without admiration: and, on the contrary, the Souls of venomous Metals may be so much the more happily used for the Emendation of Metals.

Now, as touching these good Spirits, know, they are nothing else but a pure Spirit of Wine, when it is associated with *Sol* and *Luna*, at that very time, wherein their fixed Bodies are invaded and mortified by their Enemies, and their pure Souls set at liberty; then they are received and carried upwards by these pure Spirits; and a Royal Medicine is obtained, which every Man may administer according to his understanding. There are also many other Spirits which attend Metals destroyed and mortified, that they may take to themselves their pure Souls and carry them away. But of these enough at this time. Ere long (GOD willing) I shall speak more at large of these in the Seventh Part of my *Spagyrick Pharmacopœa*.

O most High GOD, the One onely Beginning and End of all things, I making supplication from the bottom of my heart desire, that (when that general Destroyer of Humane Bodies shall come and destroy my lean and dried Earthen Mass, according to thy divine Will, and set my Soul at liberty from the Bonds of the Body) thou wilt be pleased in that very hour to take compassion on me, and send thy Ministring Spirits the Holy Angels *(by reason of thy Grace and Fatherly Mercy) to me at the hour of Death, that receiving my departing Soul, may humbly prostrate it at the feet of thy most Holy Majesty.* Amen.

The End of the Sixth Part.

THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

In which is farther treated, how of Man's Urine may be prepared the Secret *Sal-Armoniack* of Philosophers, and what incredible Works may be performed by the benefit of it, both in Medicine and in Alchymy: With an Instruction annexed how an Universal Medicine and true Tincture for Humane and Metallick Bodies may be acquired; and that no way more easie, more expeditious and less chargeable, than by the help of good Spirit of Wine, or instead of that a burning Spirit extracted from Corn, or other Vegetables.

The PREFACE to the READER.

Well-meaning Reader,

The principal Reason which moveth me here in this small Treatise (without any respect or regard of Persons worthy or unworthy) so evidently to reveal and publish to the ungratefull World the Secret Sal-Armoniack *of Philosophers, is this: namely, because, by reason of my old Age, I have now one foot in the Grave, and am ready to depart this World, and do patiently expect a far more excellent Mansion prepared by God. I, who now discover this Secret* Sal-Armoniack*, do also here intimate those vast benefits, which (by the help of that) may accrew to Mankind, accounting great Works of Mercy may be done by it; because it is that, by the benefit of which, all things necessary for Life may be acquired by all Men, whether young or old, poor or rich, as in the following Praxis shall largely be demonstrated.*

That Men (if they themselves will) may gain much, yea as much as they please, by the benefit of this my free and ample Revelation of such an inestimable Salt*, I am easily able to prove: especially, so soon as I, in the following Praxis, shall exhibit a* Specimen *of those Subjects, the abundance of which is in all parts of the World, every-where offered, no less to the Poor, than to the Rich, without any expence of Money, or other Charges; but it is known by very few, privily hated by that proud Step-Dame the World, trod under foot, and for its exterior vileness cast out upon the Dunghill, and thrown away in the corners of Streets.*

But, some One may ask, how those needy People can from Urine onely, acquire things necessary for Life, although they should know, that in it is contained a Treasure? To such an One I thus answer: It may very well be effected, because in this little Book I have

explained, not onely that in it is an abstruse Treasure, but also how it may easily be extracted. Insomuch as I doubt not, but that some of the Lovers of the Poor will do their endeavour to extract that Treasure from the same. Which being done, if the World (which will believe nothing but what it sees) take notice of it, and finds the verity of our Assertion proved in Fact, then many more will use a like endeavour to get their living from such a Subject, every-where to be had, and preparable for little or no charge. If such Operators shall need more Urine, than they themselves make, they must necessarily buy it of poor Families, abundance of which you will every-where find, readily desiring to gather the same for their daily Bread, and to bring it to the Artist: that way one hand cherisheth and helpeth another. For by this means every Re-publick might be brought to a flourishing state, so as no Man (unless he will himself) needs to want Bread in what part of the World soever he lives. I indeed have not buried in the Earth my five Talents gratiously granted to me by God, but have put them into the publick Bank. What if the mad and blind World will neither see nor hear, it may for all me follow its own desperate humour. It is sufficient for me that I have divulged such Mysteries for the safety and well-being of Mankind, as no other Philosopher before me hath ever discovered the like. For since the Subject is so very vile, vulgar and obnoxious to vast contempt and hatred among proud Fools, many of them did involve its genuine Name in the secret Cabinet of Silence. But, that I may speak my mind freely, I openly confess and aver, that in Urine is contained a Mercury*, by the help of which very much may be effected in Chymistry and in Medicine; and which is especially very conducent to deduce Metals to their first Matter; and thence may be reaped a notable Fruit of Utility, as well universally as particularly. For whatsoever I have now writ, I composed*

the same in the extremity of my discomposure and sickness, that this admirable Secret might not be buried with me in the Earth, where even all the highest Arts of the most excellent Artists seem to putrefie together with them, not being by them (before their Death) communicated to Mankind remaining; that so I may say with the Vulgar (not rightly understanding) All Habits of Understanding are not so much hospited in the mortal Body, as retained in the immortal Mind.

If all things here answer not the desire of the diligent Searcher of Art, or be not clearly and plainly enough discovered, let him look into the following Treatise, which is intituled, A Treatise of the Mercury of Philosophers*, where perhaps he will find so many desirable things, as will compleatly satisfie the hunger of his Mind covetous of learning. But for the sake of the benevolent Reader, I cannot chuse but communicate to him this Information,* viz. *that the very Inscription of this Treatise discovers a Secret* Sal-Armoniack*, and in divers places of the Sixth Part of my* Spagyrick Pharmacopcœa*, mention is also made of a Secret* Sal-Armoniack*; wherefore I would have you to understand, that the* Sal-Armoniack *mentioned in my former Book, is of a property variously different from this, of which I purpose here to write. For this is prepared of Urine, but in the preparation of that, no Urine is to be used; because that is no other than pure Silver dissolved in* Aquafortis*, and precipitated by the help of a sharp Salt-water. Where it is to be observed, that the Silver, in such a Precipitation, attracts to it self so many Spirits of the Salt, as by reason of them it is no more fusible, like other* Luna *into a Metallick Form, but becomes penetrable as Oil into a Skin. That, in my Writings, is called the* Mercury of Luna.

Note. *Of* Saturn *also, after this manner such a*

Mercury *may be prepared, which is almost of the same efficacy as the* Mercury *of* Luna*; but in some Chymical Labours it may not so safely be used as the* Mercury *of* Luna. *This must be necessarily minded by those who are unwilling to err in their Labours. Moreover, touching this Secret* Sal-Armoniack*, I think it needfull farther to advise, that either* Sal-Armoniack *(although both are diversly prepared) being added to Metals or Minerals, takes to it self and carries upward the purest part of that Metal or Mineral. Yet it is to be understood, that this is effected thus,* viz. *that the Metal is corroded by the sharp Spirits existant in the* Sal-Armoniack*, and so is carried upward by distillation; or volatilized, no otherwise than as if you should add Sublimate* Mercury *to any Metal or Mineral for extracting Butter thence. Also it is to be minded, that whatsoever shall be prepared by the help of either* Sal-Armoniack *(made with* Luna*, or with Urine) all that riseth much more pure than any sublimate* Mercury *or common* Sal-Armoniack *can cause to ascend. These few things I thought necessary to be premised, touching the difference of either Secret* Sal-Armoniack*, that no Man may err through mistake.*

Although much more should be spoken here, touching our Sal-Armoniack*, which is made of Urine; yet Time, and my present Condition, prohibit my insisting more at large thereabout.*

But that every unskilfull Man may be rendred more skilfull in the Knowledge of this Definition, it is good for him to learn, that Urine is no other than the volatile Salt of those Meats and Drinks, which we receive for the nourishment and sustentation of the Body; and which are so digested and separated by the Stomach, viz. *that the Sulphur, as a superfluity, is by Nature discharged by the Bowels; but the Urine, as a volatile Mercurial Salt,*

seeks and finds for it self an Exit through the Bladder. Now, it is more than sufficiently manifest, that the greatest part of Men live of Vegetables, as of Bread, Beer and Wine; also for Nutriments they use Flesh, Fish, Butter and Cheese: which kinds of Meat and Drink, so soon as put down into the Stomach by a certain natural Coction and Fermentation are so inverted, as some natural Mercury is thence progenited. Whence, it is clearly enough apparent, that the before mentioned Mercury (which we with the assistance of Art know how to extract out of Urine) must necessarily have been an invisible Mercury in Vegetables, before it passed into Urine, and when it was not inverted in our Body. Which is a thing most surely true, and is confirmed to us by experience, viz. *that in all Vegetables (no one of them excluded, whether Wine or Grain, Honey or Sugar, or other fat Fruits, in which our vegetable* Mercury *is most copiously abundant; also by what name soever those Fruits or Vegetables are called) the same* Mercury *is hospited; yea, it may be extracted from all Fruits, Trees, Herbs, or any common Grass of the Fields or Meadows, and from all Boughs and Leaves of wild and manured Trees, if after you have cut them small, you pour on them hot water, and then ferment the same.*

Indeed lean Herbs, according to quantity, give not forth so much burning Spirit, as Corn, Wine, or Sugar: But note; Grass is prepared with much less cost than Corn, Wine, or the Fæces of Wine or Beer. Also a good burning Spirit may be made of Grape-Stones, or the pressings of Grapes; yet as for the sweetness of that, you need not to take any care; because in operating it is so amended, as it is rendred full as good as the best Spirit of Wine that is most rich.

This Arcanum *of preparing a true Universal Medicine of all Vegetables, for those three known Kingdoms of*

ours, I take to be as great a Secret as was ever known to Philosophers, or for the future can be known. For it is that, of which many have notably writ, yet in such a Style, as they have obscured, involved and hid the whole Work in so many Parabolical, Allegorical and Enigmatical phrases, as it is almost plainly impossible for any one profitably to learn any thing out of their Writings, unless his Eyes be singularly illustrated by God. But among others, Albertus Magnus*,* Thomas Aquinas*,* Arnold*,* Lully*,* Bracescus*, and especially* Basilius*, have writ of it evidently enough to such as can see; but all they writ in obscure words: And as* Paracelsus *knew the same, so it seems that was also known to* Helmont*: yet they were afraid to write of it for their own sakes. But I now freely and openly divulging all things, do that chiefly for this Reason,* viz. *because the most wise God (to whom I give Immortal Thanks) revealed this Secret to me not many weeks since; and I, according to the weakness of my Age, could labour but little therein, and that very difficultly; therefore keeping my Bed, by reason of my Illness, I caused some Proofs to be made of the same: whence I so found the verity of the matter, as I am now able safely to confirm the same to others, and can aver, that the true* Mercury *of* Philosophers *is reconded in them. Although that hath hitherto been unknown to most Men, yet by me (because in Philosophy, Medicine and Chymistry, never any thing more magnificent than it, easier to be elaborated, or preparable with less cost, at any time before came into my hands) it is so published, as I doubt not, but that many well-disposed Persons will confidently, readily and happily set their hands to the Work. For it is easie to acquire burning or distilled Wine in abundance, without any great charge: also an Instrument made of Copper, fit for separating the* Mercury *from the* Sulphur*, will not cost much: And lastly, the Fixation of the* Mercury *will cost little or*

nothing, because it may easily be absolved, in a very short time, by One well skilled in the method of fixing. The Burning Spirit may be prepared, and the separation of its Mercury *from the* Sulphur *be compleated in the space of one day: but yet it is to be understood, that this is spoken onely to those who desire but a small quantity to experience the possibility of Art. If any one would have a larger quantity of Tincture, he indeed will have need of a longer time to prepare it in, as every one may easily conjecture.*

Whilst I lay diseased in my Bed, and afflicted with a grievous Disease (after I had by a long and serious speculation day and night fundamentally searched the power of Art) in the space of one Week, by the hands onely of my little Sons (for I could not trust such a Work with the unworthy Sons of this World) I made three small trials or proofs onely in a very small quantity, because, by my Bed side, there was no place for doing any great Work. Nevertheless, I am satisfied that I could do much more in eight or ten Days, and a far greater quantity, if God will be pleased to grant me strength for so many Days.

Indeed to an ignorant Hearer, what Wise men have asserted will seem incredible to be believed; namely, that in every Herb and Grass, the true Stone of Philosophers lyes hid. For the ignorant of Nature wonder at this. But Spagyrick Philosophers *have, now for many years past, published their Books touching the same, and affirmed, that of all things, from which the Elements may be separated, the* Stone *of* Philosophers *may be extracted and made; of the same I also, if need were, could alledge many Testimonies. May we not by Distillation and Rectification much more easily separate the Elements from Vegetables, than from rude and hard Metals? And may we not most purely and most subtilly cleanse their*

Element of Fire from them? That indeed is impossible to be extracted from Metals. But if we can, by the help of Art, turn the most pure Fire again into Earth, may not of this new Earth (when it is by the benefit of Art fixed, and rendred constant in Fire) be made a Matter purer, than all things in Nature? Every Man knows, that in Spirit of Wine is contained a great virtue comforting the Heart, but by reason of the burning heat, which it manifests in those that immoderately use it, the same is avoided not without Reason.

Now, if you shall separate the Burning Sulphur *from the* Mercury*, in the bottom will remain onely a temperate, and to all Constitutions (which are vulgarly called Complexions) gratefull pure* Mercury*, in the form of a clear sweet Water, which* Philosophers *call their* Water of Life*, and that not imprudently. For the* Alimonies of Life *are included in it, and this* Mercurial Water*, or true* Aqua-vitæ*, may be safely adhibited in all Diseases; always, provided that this Spirit be prepared of Wine, Corn, or of Herbs not stinking and venomous. But for Metallick Transmutation, every distilled Wine is conducent, of whatsoever matter it shall be prepared. Yet that, in the form of Water, is able to exercise no power over Metals, but must first be reduced into a Red fixed Powder, called by Philosophers* Gold of Philosophers*,* Horizontal Gold*,* Tinging Gold*, and* Living Gold*. And, in a word, I say you cannot find any thing pertinent to Medicine and Chymistry, more excellent than our Red fixed* Mercury *of* Wine*: for it is the true* Phœnix *or* Bird *of* Titan*, feeding its Young with its own Blood; also a true* Salamander*, which dyes not, but is nourished and augmented in Fire: and more briefly,* It is all in all things*. Moreover, Philosophers confess that all things lye absconded in all, and in good* Aqua-vitæ *all Metals are spiritually found; which I my self have in very deed*

experienced, being otherwise unable to verifie the same. O noble Hermetick Art, and Queen of all Sciences! how basely and unworthily art thou cast down, trod under foot by stinking Swine, and contemned by ignorant proud Fools! Nevertheless, I doubt not but that this little Book of mine will open the Eyes of many blinded with Ignorance, and direct many Readers unto the path of Verity*; as my Treatise lately published, intituled,* Of the Salt of Philosophers*, hath already been the Authour of much good to many. For more than one of many, who have slighted Chymistry, having perused that* Enchiridion*, according to my Information, have again fallen in love with Chymistry, set about the Work (renewing their omitted labour) and prepared the* Salt *of* Philosophers*, gave good proofs thereof, and having wrought in it for certain Days, at length gloried of their successes in Transmutation of Metals. Which Stone notwithstanding is not to be compared with that which is made of Wine or Corn; but in comparison of that is to be reputed as a Clod of Earth to a most beautifull Pearl.*

Wherefore as I before said, and always shall say, I believe that a Medicine and Tincture more sublime than the fixed and red Mercury of Wine, hath never been known by Philosophers. In the mean while, let every other Man believe as he listeth, it sufficeth me that I have written the Truth, and refused to carry hence with me into the Kingdom of Darkness the greatest Secret of the whole World. But the Reasons why I here over-hastily break off the Thread of my discourse begun, and in no-wise discover the Method by which the Burning Spirit may be prepared, and the Mercury *latent therein be separated from the same, and reduced into a fixed Tincture, are weighty and considerable. For the whole Work, from the beginning to the end, is so very vile and easie to be performed, as every Corydon or rude Shepherd (ignorant of all Chymical Arts) would*

understand and imitate that Method of preparing the same. Wherefore it is best to desist from any further explanation. Because, to whomsoever God will give it, he will so easily find it out, as there will be no necessity of speaking one word more than I have already spoke. Besides, for such inconsiderateness, I should be able to give no just Account before God, the Judge of the Living and of the Dead, if this most secret Secret of Secrets should as a Grain of Salt be sowed among the ungratefull and unworthy People. But the World is too well known to me already: yet I will openly say this, viz. *that the poorest Man, as well as him that is wealthy, may attain to this supreme Work; because, for preparation of that incomparable Medicine, no chargeable Materials, nor any long time are required.*

Truly, unto me are known divers famous particulars, by the help of which, not onely Silver, but also all other Metals are converted into Gold and Silver with great profit, yet are more difficult to be elaborated than that great Universal Work. Wherefore this also, among all other fruitfull Chymical Secrets deservedly doth, and undoubted always will obtain the Priority.

Now, Son of Art, candidly accept this my Fatherly Instruction, and Friendly Admonition, and do not at all commit any thing to Faithless Men, of which thou maist have occasion to repent afterward. Accordingly, to all the Disciples of Hermetick Philosophy and Medicine, I wish the ample Blessing of God, here Temporal, and in the life to come Eternal; heartily praying, that the most clear unextinguishable Light of God, may perfectly enlighten them, as it did me at the first. Amen.

Of the Secret Sal-Armoniack.

Touching this our Secret *Sal-Armoniack*, I have made

mention in divers of my written Books; but the way of Preparing it I have left to be divulged in this place. For after I was assured, that many had laboured much to find out its Preparation and Fruitfull use in Medicine and Chymistry; I resolved no longer to conceal the Preparation and profitable use in Chymistry, of our *Salmiack*, from the Lovers of our Profession; but chiefly for the sake of the Sick (to whom it may be very great comfort and solace) I chose rather openly to divulge it, without any privy concealment, in these my Writings; hoping that by the publication of this, I shall do good to many thousands of Men, and for a sign of triumphal Joy crown the Head (as with Laurel) of the victorious Queen of the Spagyrick Art.

First of all, it is to be observed, that this Name is imposed upon this Subject, because it in many things agrees with common *Sal-Armoniack*. It pleased us to add the Epithet of *Secret*, because this Salt is known to very few in the whole World; and they who acquired it to themselves, neither published it, nor exposed the same to common use, but kept it to themselves as a great Secret; and as often as they made mention of that Salt in their Writings, they named it their *Salmiack*; for proof of which, if need were, I could produce many Examples.

Cosmopolita, being about to speak of this our *Salmiack*, cryes out thus: *O our Sea! O our Sal-Armoniack!* His *Sea* was Oil of Vitriol, and his *Salmiack* the Volatile Spirit of Urine. When these two are joyned together, they give forth from themselves our Secret *Salmiack*; by the help of which, so many wonderfull Works are performed in Medicine and Chymistry, as you shall here following hear.

Paracelsus and *Helmont* called this Salt, *Alcahest*;

being that, of which the former writ little, but the latter very many things; and yet both kept the same secret to themselves onely, insomuch as *Helmont* discovered it not, even to his own Son; and other Men, his intimates, requiring it of him, he put off, saying, *It is an Ens very difficult to be acquired*: and thus he freed himself from the importunate Intreaties of many. And how little others could get out of him, is manifest by the following Saying, which is thought to be his. *The Liquor* Alcahest *is made of Blood and Urine*. It is credible that he might make such an *Alcahest* of those Subjects. But the reason why that kind of *Alcahest* may be prepared of Blood and Urine, as well as of Oil of Vitriol and Spirit of Urine, is this: There is a great affinity and similitude between the Macrocosm and Microcosm, *viz.* Man; insomuch as whatsoever may be had in the Macrocosm, may also be found in the lesser World Man. For as in the great World an Universal Acidity, *viz.* Vitriol, commonly is generated in Subterranean Fibres, Beds or Veins, and is there kept in perpetual Digestion by the Central Fire of the Earth, and at length ripened into Mineral and Metallick Bodies; so also, in the Body of every Man, the Blood of the Veins (as an Universal Microcosmick Acidity) is generated, and by long Digestion of the central Fire of the Heart augmented, meliorated, and at length transmuted into Flesh, Skin, and Bones. Therefore, in the Blood of Men or Animals you may find an Acidity, like to that which is found in the great World: Hence it may be said, that our Secret *Salmiack* may as well be prepared of the Blood and Urine of Animals, as of Oil of Vitriol and Spirit of Urine. Nevertheless, I say there is a vast difference between these two; for Oil of Vitriol may be amended and rendred more subtile by Rectification, which Subtiliation cannot be effected

with the Vitriolate Acidity of the Blood of Animals. Therefore we deservedly give the Priority to this rectified Oil of Vitriol, as being that, which in every Chymical Labour is found far more efficacious than that of Blood. For this cause leaving that Blood, let us set about the Preparation of our Secret *Salmiack*, with cleansed Oil of Vitriol and Spirit of Urine subtily rectified.

The way of making our Secret Sal-Armoniack.

Recipe of Oil of Vitriol excellently well deflegmated and rectified, one pound; upon which Oil of Vitriol, leisurely pour on so much highly rectified Spirit of Urine, as untill there is no more action each upon other, but they be mortified and still. In that Conjunction, from two Contraries, ariseth a middle Salt. This Operation being rightly performed, you will find a sharp penetrating Liquor, in which is a power of carrying upwards with it self the purest Essences from Animals, Vegetables, and Metals: which is what no other Entity in Nature is able to perform the like, as we purpose to shew. Therefore if any one, desirous to make of this Salt Liquor a dry *Salmiack*, do in gentle heat of *Balneo* abstract the unsavoury Water thence, in the bottom will remain a fair white Salt, which is our Secret *Sal-Armoniack*; by the benefit of which wonderous Works, may be performed in Medicine and Chymistry, as hereafter you shall hear. Now follows

The Use of our Salmiack*, by the help of which, from* Vegetables *may be extracted very efficacious, and indeed incomparable Essences.*

How or which way the Ancient and Modern *Spagyrists* prepared their Essences of Vegetables, is now long

since well known throughout the World, *viz.* by Spirit of Wine. Which way of Extracting is indeed of it self a Work very chargeable; yet Spirit of Wine readily extracts the Essences of Vegetables and Animals, leaving the unprofitable Fæces behind. Also, it is not unknown to us, that Spirit of Wine in extraction so notably changeth the Virtues of things extracted by it, as the Extract is of less force than the Simple whence it was made, and that most manifestly in *Catharticks* or Purging Simples, insomuch as commonly the Dose of the *Extract* must be greater than of the *Simple* it self. The reason is, because all Purgers acquire the greatest part of their Cathartick faculty from that crude and immature Substance, with which they oppose the Stomach, and therefore are not entertained by it, but presently expelled, during which Expulsion the Excrements also are cast out. Therefore the stronger Crudity is predominant in Purging things, the more impetuously do they move the Stomach; and the more strongly the Stomach casts out and expells that, so much the more vehemently also are the noxious Humours of the Body cast up. If a Cathartick be too crude, rough and immature, the Stomach rejects it much more strongly, because the whole of Nature is thereby disturbed, and with all its might endeavours wholly to expell such a rude guest. In which violent expulsion, the Radical Humours are expelled out of the Body, together with the Excrements, that the Body may be totally freed and disburthened of the pernicious filth of them.

The Stomach so abhors some Vegetables, and is so impatient of giving them any time to abide there, that they may by little and little be expelled downward by Seidge, as it (enraged with so great nauseating and loathing) violently casts them up. In

which Excretion a tenacious viscous Choler, always hurtfull to the Stomach, is expelled, which would difficultly otherwise be cast out by gentle Purgations, as is seen in *Asarabacca* and *Hellebore*. For as often as they are taken by a sick Man, without any previous Preparation, they continually excite Vomiting; but if extracted with Spirit of Wine, they vomit not, but onely work downward.

By all which it appears, that Spirit of Wine, in extracting the Essences of Vegetables (by its natural power) so notably changeth the Virtues of Herbs, as it is not fit to be used for all kinds of Extractions; and that by reason of its Nature varying or altering the property of things. Nor can you, in some Diseases, safely use those Extracts which are made by Spirit of Wine, because Extracts are heightned in their Heat by the Spirit of Wine, and therefore should be avoided in acute or burning Diseases. On the contrary, our *Menstruum*, *viz.* our Secret *Sal-Armoniack*, in Extraction, alters not the Virtues of Species for which it is used, but extracts from them onely what is most pure, and carries over with it by Alembeck, a certain most sweet Essence, which Spirit of Wine can in no wise perform. Therefore we deservedly give Priority to our Liquor *Alcahest* in extracting the Essences of Vegetables and Animals. Yet we would by no means labour to bring Spirit of Wine into contempt, since it, in some subjects, so excellently exerciseth its power, as it gives place to no other thing. But the Water of our Secret *Sal-Armoniack* perfects its Extraction in a far differing manner; because, by the help of Art, that conjunct of two sharp penetrating Entities (viz. *Acid Oil of Vitriol*, and *Alcalisate Spirit of Urine*) is reduced into one temperate middle Salt, which Salt is almost of the same disposition as common *Salmiack*, except that in

all its Operations it is found to be more sharp, more penetrating and more efficacious than it.

Now let us come to the matter it self, that we may see of how great use our *Alcalisate Vitriol*, or *Vitriolate Alcali*, is for preparing some famous Medicine. I suppose it will be worth my while, if I first of all begin with that Medicine which *Paracelsus* taught to be made of *Aloes*, *Myrrh*, and *Saffron*, and is by venerable Antiquity, and by all Authours of long life highly commended, and named *Elixir Proprietatis*. And since *Paracelsus* in describing so noble a Medicine, used few words, but enlarged them much in extolling his *Elixir Proprietatis*, it will not be amiss for us, in this place, to transcribe his own Words following, thus:

> "So also Nature sheweth us an *Elixir*, is that which of Natural things may be made compleatly perfect in its proper Essence. Such is the *Elixir of Myrrh*, *Saffron*, and yellow *Epatick-Aloes*. But whence they have this power, we have shewed in the generation of them. But we come now to the Process, (omitting their beginning, of which we spake before) which runs thus.
>
> "*Recipe* of Myrrh, Epatick, Alloes, and Saffron, of each one Part, which digest together in a Pellican placed in Sand, for two Months with gentle heat. Then by Alembeck separate the Oil from the Fæces without Adustion. This Oil digest together with an equal Weight of the Circulate for one Month, afterward keep it.
>
> "In this are all the natural Vertues of a

> Balsam, and a greater conservative Vertue for those that are aged, than is lawfull for a man to utter: because from it proceeds not one Age onely, but 4, 7 or 10, *&c.* It is scarcely possible to express the Vertues and Natures of it: But as we judge, enough is discovered by us already, which we think needs no further Interpretation."

Here *Paracelsus* describes his *Elixir* in words so obscure, and likely to cause Errour, as no man untill this day could ever prepare any thing that was excellent, according to the tenour of his Words: *Helmont* among others complaining, that he concealed the use of the Alcahest in describing the manner of that Preparation. For whosoever useth that, in such a Preparation, he obtains a Medicine of so great vertue, as it is able to do whatsoever *Paracelsus* ascribes to his *Elixir Proprietatis*.

But if any man be not satisfied in what is here published by me, let him consult *Helmont* discoursing thereof more at large.

Now behold here presented to thee my Process for preparing a Medicine of these three *Species* reduced to Powder, *viz.* of Myrrh, Alloes and Saffron. I took of that mixture 8 Lotones, 4 Ounces, which I put into a Phial, and upon the same poured one Pound and half of our good Alcahestick Liquor, these I set into a warm Bath to be digested for two or three Days. During this digestion our sharp Liquor dissolved these *Species*, and very well united it self to them. This being done, I poured the whole mixture out of the Phial into a low Cucurbit of Glass, and well luted the Head to the Receiver, and by gentle heat of *Balneo* caused whatsoever would ascend, to be gathered apart in several Recipients.

1. A white penetrating Aromatick Spirit, of a most fragrant Odour according to *Helmont*'s words.

2. A yellow and red Spirit, and both indeed very efficacious. Yet each of these should be received apart.

3. Lastly toward the end (after all the moisture is ascended, and the Fire is a little somewhat encreased) a strong scented red cleaginous alkalisate Liquor; which is such as serves instead of a Balsam, most excellent, presently helping or very salutary in all green Wounds and fistulous Ulcers. The subtile Spirit should be administred inwardly, for comforting or suppling the Body with all its internal Members, and for preserving the same magistrally from all vitious affects. Such a most present Remedy is earnestly desired, by the aged and weak. The Ingredients are of a Balsamick Disposition, and the preparation of them is artificial and subtil, so as a famous Medicine cannot choose but be made of them. For our *Salmiack* is of such a Nature, as by it all Vertues of Vegetables, Animals and Minerals are exalted, amplified and meliorated, and that by reason of the Exaltation by it inferred on the Subjects in elaborating; as may more exactly be learned, when any one goes about to prepare the same, and shall as it were with his hand, palpably touch the vertue, and discern the verity thereof. Therefore here is instituted a Process of preparing Saffron, Aloes and Myrrh, by which you may know how to work with other Vegetable and Animal Subjects, so as we have no necessity of prescribing a peculiar Process for every Medicine. Here onely it is to be noted, that an accurate Regard is to be had of weight and measure in mixing the Subjects with the Liquor Alcahest. For if less of the Armoniack Liquor than is fit be added to

a dry matter, all the Liquor so includes it self in the dry matter, as little of the Spirit can ascend in distilling. But if more of the Liquor be poured on than is fit, the ascending spirit will not be efficacious enough, because the vertue of that Subject diffuseth it self too largely into that aboundance of Spirit. Wherefore in all things measure and weight are to be observed. Dry *Species*, such are Herbs, Roots, Seeds and Flowers, drink up much Water; but Woods not so much, Stones and their like, much less than they. Therefore, if any one, in labours of this kind would do something to purpose, he had need to be wary, that he do neither too much, nor too little, but in all things observe a mean: so doing, he shall suffer no loss, nor ever labour in vain. For it is almost impossible to describe all *Arcanums* so evidently, as every Clown may comprehend the same without any search.

I have here laid Foundations with reason sufficient, every one may build, or not build upon them as he pleaseth. Also he may read *Helmont*, who did indeed of this matter write largely enough, yet he is not always to be understood according to the Letter; for in most places of his Books, he concealed his manual Operations, especially in his Book of the Tree of Life, where he treats of the Cedar Wood. The preparation of the same requires no tedious long space of time, but it may be performed in a few hours. Indeed it would be the part of good Physicians to introduce this Preparation of more noble Medicines into their Apothecaries shops, and thence to exclude some part of their corrupted Remedies. For this being done, so many men would not be basely neglected, nor untimely hurried out of this Life, by the use of unprofitable Medicaments, as too often now are.

It is not enough for you to have a Name from *Galen*, and in the mean while not at all tread the Footsteps of *Galen*'s vertues. *Galen* was an honest Heathen, and whatsoever he had gathered with much and long study, he left to us accurately written before his Death.

How experienced a man in Medicine *Hippocrates* was, his Writings do clearly shew.

Also that *Avicen* was an industrious Physician, by his remaining Litterary Monuments, is very manifest, and especially by that Epistle, which he writ to his Son *Aboali*; for in that he commands him first to furnish himself with sixty Pound of most pure Mercurial Water (whence he should make the universal Medicine) before he presumed to proceed to Coagulation of the Stone.

These indeed were men adorned with high Experience and a good Conscience, who gloried not in the bare Name of Chief Physicians, but proved themselves such indeed, shewing, that they were not idle Adorers of the Goddess *Vacua*, but men most laborious, as becomes every conscientious Physician to be.

Touching that Mercurial Water, which *Avicen* commended so much to his Son, for making (of it) the Universal Medicine, we shall here following (*Jehovah* assisting) somewhat more largely speak, *viz.* how it, by our *Salmiack* may be extracted from Metals, and then be coagulated into an Universal Medicine.

Indeed, particular Medicaments are not to be contemned but to be esteemed as good things, to them that make a good use of them. But Universals are sought by Physicians, being such, as by which

they can get more Honour and Riches, than by Particulars, because they are known even to every old Woman. Universals are not to be used after the manner of Particulars, particularly to serve for this or that Member of the Body, or to resist and heal this or that Disease onely: but they seek out every *Chachexy* (which lies privily dispersed through all parts of the Body, impairing Health) and having sought it out, cast it forth of the Body, as well visibly as invisibly through all Emunctories, as shall seem good to Nature, and will be most conducent to health. Universals consume occult Diseases hidden in the Body of man, as Fire consumes Wood. Also Universals tinge every vitious Habit of the Body (which otherwise can be expelled by no particular Medicine) and transmute it into a better State, so as the Evil of the Distemper is inverted and converted into good, in the place where it is hospited, no further expulsion being required. Of like Universals, we will afterwards (God giving leave) speak more at large. Now the time admonisheth us to return to our *Sal Armoniack*, to contemplate what farther fruit of Utility it is able to effect in Medicine.

Helmont, in his Treatise of the Stone makes mention of a certain Medicine, which by his Alcahest he prepared of *Paracelsus* his *Ludus*, which would resolve the Stone in the Bladder, and expel it in fourteen Days. *Paracelsus* ascribes to his *Ludus* wonderfull Vertues, which it exerciseth in breaking and expelling the Stone of the Reins and Bladder. In which *Helmont* posits his Foundation, shewing where such a *Ludus* may be found, and how by his Alcahest it may be prepared into a Medicine so admirable, as it becomes the supream Remedy against the Stone.

As touching the *Ludus* it self, *Helmont* saith of it,

that it may be copiously found in the Scald shores at *Antwerp*, and that it for the most part consists of a certain volatile Macrocosmick Urinous Salt: and I making search into the same, have found it just as he described. Likewise, I also, according to his prescribed Rule, endeavoured to make such an excellent Medicine, and then found the Liquor of the *Ludus* to be such as he affirms he himself made by his Acahest, *viz.* this way.

I took one Pound of that *Ludus* beaten to Powder, and mixed it with one Pound of our Secret *Salmiack*, and thence drew off the volatile Humidity with gentle Fire in a coated Retort; and then augmenting the Fire until the Retort was very hot all over. When all was cold, I found the *Ludus* with the more fixed part of our *Salmiack* melted together into a yellowish dark coloured Stone, which (according to his Doctrine) I laid in a moist Cellar to be dissolved, and that Stone in 24 hours was resolved into a greenish Liquor, and it had a burning Taste upon the Tongue, yet it is not loathsome to be taken into the Body, with Wine, Beer, or other suitable Vehicles of Water. I my self also have given this Liquor to some troubled with the Stone, who by taking it were greatly eased. But that the whole Stone should by help of that be resolved and cast out, in so short a space of time, I have not yet found. Hence here it seems to me, that *Helmont* (as did *Paracelsus* in the Preparation of his *Elixir Proprietatis*, and the incredible Vertue thereof) hath extolled his Remedies with a too much elated Style. They are assuredly admirable Medicaments, but that they are able to effect so much (in all men without distinction) as are ascribed to them, I cannot assentingly witness, although I was at great expences, and nor a little turmoiled about them, yet in the mean while I found

out many excellent things, the Declaration of all which would be too tedious to be here inserted. But I must needs, in this place, insert some few of those many things I then found out.

If any one apply to the Seeds or Roots of those Herbs, which are commonly wont to be administred, for expelling Urine and the Stone, (the Seeds or Roots being first reduced to Powder) a little of our *Salmiacal* Water, and digest it in gentle heat of *Balneo* for 24 hours, and afterward distil it, a most efficacious Spirit will ascend; which Spirit I have found to be more excellent in expelling the Stone, than the *Ludus*. In like manner those insects, which strongly provoke Urine and the Stone, I have also digested and distilled with our Liquor of *Sal Armoniack*, and got a Spirit more strongly expelling Urine, than any Spirit prepared of Herbs. Wherefore this is to be warily used, and such forcibly expelling things well observed, among which more forcible than all other are the fat evilly smelling black Worms of *May*, and Cantharides.

After the same manner, as we have taught to be here done, may also be instituted an Operation for extracting (by distillation) from all Vegetable and Animal Subjects their most potent Vertues and purest Essences, by our Vitriolate Alcalick Water; *viz.* from Aromaticks, egregious Cordials; from Woods and Roots of Sudorifick Herbs, famous Diaphoreticks; from soporiferous Simples, admirable Anodines; from purging things most excellent Catharticks, *&c.* But there is no reason I should longer insist on these things of less value, since every skilfull man can prepare himself such medicinal Spirits as he hath need of. Here he cannot easily commit error, since for all Herbs, Seeds, Roots, Flowers, and Woods,

there is but one onely way of preparing them into most efficacious Essences, by our vitriolate Alcaly. But a better way than any other, yet to be discovered, how by our Urinous Liquor, yet more efficacious Essences may be extracted from Vegetables and Animals, is this:

We are not ignorant, that Spirit of Wine, which is for the most part generally used for Extraction of Vegetables, doth not sufficiently extract them, nor carry upwards with it self what is extracted; but *per se* onely ascends, and leaves the Extract in the Bottom of the Vessel. On the contrary, our vitriolate Spirit of Urine (much more sharp than Spirit of Wine) doth not onely powerfully invade Vegetables, and attract to it self their Essences, but also in distillation carries them up with it self, which is impossible for Spirit of Wine to do. For although the Spirit of Urine (according to the external Face) doth as it were mortifie the corrosive Oil of Vitriol, and change it into a volatile Salt, and the Oil of Vitriol coagulates the subtile Spirit of Urine into a volatile Salt, insomuch as of two unlike Entities is made a middle Salt; yet both those unlike parts are not wholly changed in their former Nature. For the Acidity of Vitriol remains yet acid, and the Urinousness of the Urine urinous; and both also by the help of Art may again be separated each from other, so as either of them may perfectly recover its own pristine qualities, and nothing of them be found to be lost. As for example, suppose

It be required, that I should recover my Spirit of Urine, as pure and subtile as it when poured on the Oil of Vitriol: Then I add to our *Salmiack* (according to just measure and weight) onely so much *Lixivium* as of the Acidity is mortified, and the Spirit of Urine

ascends subtilly pure again, and full as good as it was before its conjunction with the Oil of Vitriol. But the Oil of Vitriol is altered, and by the Salt of Tartar reduced into a middle Salt, which also wants not its Fruit of Utility in Medicine and Chymistry. If you would from this mixture recover our Acidity with the Spirit of Urine, add to our *Salmiack* a Subject easily dissolvable; mix and give a gentle Fire, for then the Acidity sets upon that Subject easie to be dissolved, and dissolves the same, and makes abundance of its concomitant Spirit of Urine to ascend, which in its ascent takes up with it self the purest Essence of the Subject added, loosed by the Acidity in Solution, and thenceforth may be used for Medicine and Chymistry, according as the Subject was. For Example, If I add red Corals beaten to Powder to my Alcahestick Liquor, the Acidity corrodes those Corals without any delay, and lets go the Spirit of Urine, which brings over the helm with it self the Essence of Corals. But the Acidity, when you please may by distillation be separated from the Corals. If to our Liquor be added Pearls, the Spirit carries the vertue of them upward with it self. And if you add Stones, Minerals and Metals, the Spirit of Urine doth likewise carry up with it self the Essences of them. But the Acidity remains in the bottom with the Stone or Metal, and may afterward diversly be again separated from the Stone or Metal, and applied to this or another use.

Having already heard how the most pure Essences of Vegetables and Animals, by our secret *Sal Armoniack* are to be distilled by ascent, let us now also see, how Metals and Minerals may be highly purged by the same, and reduced to their first matter: which first matter is no other than a most subtil Mercurial Water, in which the purest part of

the Metal is latent in the form of running *Mercury*, which *Mercury* is fit for preparing whatsoever Work you will of it, either *Sol* or *Luna* particularly, or a true Universal Tincture, vastly tinging. Nature, in the Bowels of the Earth did primordially generate all Metals of such a volatile *Mercury*. For when the *Astrums*, through the Air, seminate their metallick Seed, that Seed is from the Air introduced into the Earth, where that, as matter clean or unclean offers it self, produceth Metals either pure or impure. Wherefore Philosophers rightly determine the Root of Metals to be sited in the Air, but their stem and branches in the Earth. Daily experience teacheth us to give credit to this, as often as in digging we come to the deepest scituation of Metals, great Experiments of this matter discover themselves to us, but because touching this enough hath been said already, we forbear to proceed further in such a Discourse. Here enough is said, namely, that we know the Original and beginning of all Metals to be no other, than an Airy subtile Spirit, in which are reconded the Sulphur and *Mercury* of Metals. Therefore, since here purpose is to give so great Information to every most unskilfull man, and as it were to put that in his hands, which may be done by the help of our secret *Salmiack*, I think not amiss openly to discover certain Examples of Processes, evincing the power of the same. Wherefore I here offer a Possible

Way of preparing a subtile Mercurial Water (from which a running Mercury, called by Ancient Philosophers, the Mercury of Philosophers, may by the help of Art be ripened into a most potent Tincture) out of all Metals by the benefit of our secret Sal Armoniack.

Let the Searcher of Art know, that the Preparation of the *Mercury* of Metals and Minerals, is of a diverse kind.

But generally, a Mercurial Water may be prepared of all Metals, yet of one more easily, than of another.

Recipe the filings or raspings of a Metal, as *Mars*, *Jupiter* or *Venus*, one Pound, with which mix half a pound of our dry *Salmiack*. If these be well mixed and by Retort distilled, the metal will be corroded by the Acidity, and the *Mercury* thereof be freed from its bonds, or separated by Distillation, because the Spirit of Urine carries that up with it self invisibly; but when the Spirit is extracted from it, it becomes visible, as afterward shall be taught.

If you pulverise the Remanency or Residue of the Metal, and boil it with Water, you will have the Vitriol of that Metal you used, *viz.* of *Mars* green, of *Venus* blew, of *Jupiter*, *Saturn* and *Luna*, white, of *Sol* yellow. The cause of such Vitriol is this: since the Acidity of our *Salmiack* adheres to the Metal, it in some sort dissolves that, and in such wise prepares it, as by the help of common Water, the same may easily be dissolved.

Note: If the Metal (which shall remain in the bottom of the Vessel, after the Vitriol is extracted from the same by the help of Water) be mixed with fresh *Salmiack*, that will again be conducible, but not yield you so much *Mercury* as you got the first time. And if you make the same trial a third time, a little *Mercury* will ascend, but not so much as did the second time.

Which cropping of golden Branches from the shaded Tree *Virgil* excellently discovered when he said: One being pulled off, another succeeds, if the

Fates call thee, otherwise by no strength, nor any Iron, canst thou pull off that Branch. Of which cropped or pulled off Branches, the first is greatest, and most rich with Gold; the second is less and more poor; the third much less and most poor. Therefore it will be no profit to you to pluck off more than one Branch, but it is better in proceeding further, always to take new matter.

Out of that Vitriol in another certain manner, *Mercury* may again be extracted, which *Mercury* will be far more noble than the first, as shall be shewed more at large here following.

In the mean while, to the Lovers of this most noble Art, I cannot choose but demonstrate a wonderfull thing, which is this: Whensoever you shall pour Spirit of *Jupiter* (prepared in the above commemorated manner, and most subtily rectified) upon the Spirit of *Mars*, the *Mercurys* both of the *Mars* and *Jupiter* will suddenly embrace each other, and be connexed in such a bond of Love, as leaving the Water, they will conjunctively settle to the bottom in the form of very small golden Atoms; which Atoms of Gold, in that moment in which they are formed of both the *Mercurys*, you shall see converted into constant and fixed Gold. Which I take to be one of the greatest Wonders, whichever came to my hand in all my Chymical Labours. If I had tried this Experiment but once, I might my self have doubted the truth of the same. Indeed I have found out the cause of this swift fixation of *Mercury*; but I should do very inconsiderately to divulge the same. *Paracelsus* writes in his Heaven of Philosophers, that no melioration of Metals is to be expected, unless they be first spiritually mixed. Other Philosophers likewise say, Metals are first to be reduced to their

first matter, that is, into a subtile Spirit, before they can be nobilitated and bettered: which I know to be consentaneous to verity, according to the Testimony of the following Example; which is another wonderfull Experiment, to be performed (by the Spirit of *Jupiter*) thus.

Dissolve a little Gold in common *Aqua Regia*, into which Solution pour a little of our mercurial Water, mix it by stirring or shaking the Vessel well: then the *Mercury* of *Jupiter* in a magnetick way, continually attracts the Gold to it self from the *Aqua Regis*, and tingeth the Water with a Blood Red Colour, at length the Gold, with the *Mercury* of *Jupiter* conjunctively will be precipitated to the bottom of the Vessel, in the form of a purple Powder: which being edulcorated and reduced with *Borax*, the greatest part of the *Mercury* vanisheth, but a little of it will remain with the fixed Gold, and render that snow like and friable. By which we may see in how great Love Gold answers to Tin.

Yet this is not the true way of preparing any thing eminent, and to purpose of both. Therefore, if any one expects a noble product from both, he must with gentle Fire fix this purple Gold, that the *Mercury* of *Jupiter* may not fume away, but remain with the Gold.

In both these recited Experiments to our sight is exposed so swift a Fixation of *Mercury*, as every man, although but of weak Apprehension, may easily see, that the Transmutation of Metals is truly true, and that the same (by the help of the fixed *Mercury* of Metals) may be done by projection in a moment. For *Mercury* fixeth *Mercury*, being joyned in a just proportion. Therefore if volatile *Mercury* can do that, how much more will the same, when fixed perform,

being that, which bears about it self its own Sulphur.

Although I could as well discover other ways of preparing a good Mercurial Water of a Metal, by our secret *Sal Armoniack*, yet I consider, such a Liberty of publickly imparting things, would rather be injurious, than profitable; because Pearls would be without distinction, cast before every sordid Swine. But more than enough being already published, Time admonisheth us to desist, especially because there is an intire Treatise of the *Mercurys* of Metals written and published. Yet I must confess, that this *Mercury*, prepared by the help of our *Salmiack*, is of another nature and property than the other prepared in another manner. There is little else now remaining, unless, to shew the way of extracting *Mercury* from Minerals, by help of our secret *Sal Armoniack*; which *Mercury* is able to effect as much in Medicine and Alchymy, as the other extracted out of Metals. Here follows

The Process.

Recipe of Antimony pulverised one Pound, of our *Salmiack*, ½ a Pound, these well mixed, distil by Retort, and our *Salmiack* will all come off, and by the Alembick carries with it self the most pure *Mercury* and Sulphur of the Antimony, of a Black Ash Colour, which Sublimate is named the Head of the Crow. For if you cast a little of it into pure Water, the *Salmiack* will melt, and the *Mercury* and Sulphur will remain in the Vessel like a gray Powder, which if you dry, and then touch it, you will find it like to thin light Feathers, whence it acquires to it self the Name of the Crows Head. Therefore, when you shall make it hot in a Crucible, it melts into a red Stone, which indeed is nothing conducent to our purpose. Yet if

you would thence make somewhat that is excellent, you must observe such a Process as this, here following. Put your gray sublimate or Crows Head, which did ascend (being first reduced to Powder) into a Glass Body, and upon it pour so much of my Tartar, as shall be needfull for mortifying the Oil of Vitriol, then lute an Head thereon, fitting a Receiver thereto, and subminister Fire in Sand, untill all the Humidity shall ascend. This being done the Acidity remains with the Salt of Tartar, and the Spirit of Urine ascends alone, carrying upwards with it self the most pure invisible *Mercury* of Antimony, which afterward by the help of *Sol* or *Luna* (as above we taught of *Mercury*) becomes fixed and visible. But a very small quantity of *Mercury* ascends, which doth much displease the unsatiable Slaves of *Avarice*; because they rather take delight in immense Masses of Gold, equal in magnitude to the Head of an Ox. Yet no good man desires that, but is content with that little, which God is pleased to give him. Nevertheless, if any one would have a great quantity of that, he may obtain the same. For the Subjects, whence it is extracted are preparable for no great charge, being such, as enough of them may always be had. From one Pound of this mercurial Water, scarcely three or four Grains of corporal *Mercury* will ascend. For the greatest part of it remains in the bottom with the Sulphur and Salt, which are fixed apart, as hereafter shall be taught. But in that so little *Mercury* lies hid in the mercurial Water, other Philosophers also knew, unanimously teaching, that *Avicen* is to be followed, admonishing (in a certain Epistle to his Son *Aboali*) all that he had need of 60 Pound of most pure mercurial Water. For if the whole Water were *Mercury*, there would not need have been so much. Philosophers call this not *Aqua*

Vitis, but *Aqua Vitæ*; because the *Mercury* in it is most spaciously dissipated, as afterward (God willing) shall be discoursed more at large.

Now returning to our *Crows-head*, let us see whether it may be made white, by a lotion of a sharp *Lixivium*. If you take the Glass out of the Sand, after you have once abstracted thence the Mercurial Water, you will find your black Crow turned into a white Swan: for in the Glass you will find a Snow-like Salt, which if you take out, and put into another round Glass, or Philosophick Egg, and set that into a Fixatory Furnace to be fixed, the white Colour in twenty fours hours waxeth yellow, and a little after puts on a Blood-like Colour. Yet it is not then so well fixed, as that it may be taken out, but must be suffered to stand for some time in burning Coals; yet with this Caution always, that the Fire be no stronger, than by which the Red Stone may be liquified, and remain liquid in, like Oil. For it will melt as easily as Wax, and neither the *Mercury*, nor the *Sulphur*, nor the *Salt* evaporate; which is that which affects the mind with admiration. I have made trial of this in a Glass with a long neck standing out of the heat, where I could see not so much as one Grain to ascend; whence I conclude the same Operation may be done, and such Fixation made in an open Fire in a covered Crucible made of good and fit Earth well burnt. For the Salt of Tartar united with the Acidity of Vitriol, doth so embrace the whole *Mercury* and *Sulphur*, and as it were hold it concluded in it self, that the same is compelled to abide in the Fire, and permit it self to be ripened. Thus this volatile Salt to our *Mercury* is the *Luting* of *Sapience*, and *Seal* of *Hermes*, with which it is so bound, as it is constrained to abide in Fire untill 'tis

fixed. After it shall be fixed, it may be used with admirable profit in Medicine and Chymistry. But you must rightly make trial, whether it be well fixed or no, thus: Put an Iron Wyar into the liquified Mass, and with that take up a small quantity for proof. Wash away the Salt from it, and cast the Red Powder upon a Silver Plate heat red hot: if it fume not, but enters and tingeth the Silver, not with a black, but with a yellow Colour, then the *Mercury*, with its *Sulphur*, is fixed. Whosoever hath but once fixed this Stone, hath done a very great and profitable Work, although he hath spent many Weeks in preparing the same. For so soon as the *Mercurial Sulphur* of *Antimony* shall be fixed, some of it may presently be applied to necessary use, and instead of that as much volatile and immature *Mercury* added; then the fixed *Mercury* willingly admits into it self its Brother not fixed, that together with it self it may also become fixed. Therefore as many Months as the first Fixation required for its perfection, in so many Weeks may the second be absolved. Also the second Fixation being compleated, another part of the Medicine may again be taken out, and other not fixed *Mercury* again be put in, and so forwards to infinity, or as long as the Artist shall think fit.

Although this fixed Tincture of *Antimony* be an Universal Medicine, healing all curable Diseases; yet for Metals it is onely a particular Tincture, by help of which you may indeed convert Silver, by graduating, and at times, into Gold; but yet at one time you cannot tinge the whole Body. For God hath not endowed it with so great power, yet he hath liberally bestowed that on it which is worth while; insomuch as we owe as great praises to God most high for the same, as they are obliged to render to him, who are partakers of the great Stone of Philosophers.

As we have hitherto taught the way of Preparing a particular Tincture for Metals, and an Universal Medicine for humane Bodies of despicable Antimony; so also may a Tincture be made of *Auripigment*, immature *Mineral Electrum*, *Cinnabarine Sulphur*, and all other such like, by the help of our Secret *Sal-Armoniack*. Wherefore, by this one onely Process is sufficiently explained, how from other like Subjects (where *Sulphur* and *Mercury* are conjoyned) such a Medicine may also be prepared.

Whosoever well understands this way of fixing *Mercuries* prescribed by me, will find more Secrets than he can ever think of, imagine or feign to himself. For since such a Fixation may be performed in open Earthen Vessels, you have not onely this conveniency, that as often as you please you may take out some of it, and make trial untill you come to a perfect Fixation; but also you have this prerogative, that your *Mercury*, with its *Sulphur*, is fixed with a flaming Fire, which always immediately toucheth our *Sulphur* and *Mercury*, and exalts the same in its own congenited Tincture, which is what a close Fire cannot do. Every Fire, by its own nature and property, infers a Tincture in Mineral Subjects, especially when the Flame can immediately touch the Subject neither closed nor open, as above you heard, where we treat of Rubefying the fixed white *Sulphur*. We discern the same in Crucibles made of white Earth, and set one within another, that the outmost, which is exposed to the touch of the Flame becomes Red; but those which stood with in it (being free from the contact of the same) remain white.

Also we are not ignorant, that those who make Tobacco-Pipes, (that they may have them purely white) do burn them in a large Pot, that they may

not be touched by the Flame, and so be tinged with Redness. Whence it is sufficiently understood, that even in Fire is a Tincture, by which white Bodies are tinged with Redness. Hence I, not without reason, say: He is not ill advised who ripens his Tinctures under a certain Covering in open Vessels, because they that way are not onely sooner fixed, but also exalted in their Colour; yet with this Rule always observed, *viz.* That the Tinctures be always sealed with *Hermes Seal*, or Philosophically surrounded or luted with the *Luting* of *Sapience*. Where note, that the *Luting* of *Sapience*, of which I here treat, is not to be used for fixing all Subjects, and preserving them from flight, but it is an emolument and help to those Subjects onely, which are as well Sulphureous as Mercurial, and delight in the Communion of constringing themselves by these Salts, and without departure constantly remain with them in Fire, and preserve them also from flying away. That by such a way, *viz.* by the benefit of *Hermes Seal*, Mineral Sulphurs may be fixed into Tinctures, ancient Philosophers closely concealed as a principal *Arcanum*, and scarcely any of them hath ever made mention of an Artificial Fire, except that very ancient Philosopher *Artephius*, who most excellently speaks much after this manner: *Our Fire dissolves all things, penetrates all things, destroys all things, participates of Sulphur, is equal, continual; yields no smoak, unless it be excited, for Matter it is taken from elsewhere*, &c. Now accurately mind, whether here is not notified such a Fire [as I speak of]. *Pontanus* in his Epistle saith, he travelled almost all the World over, that he might find some true Philosopher, of whom by Converse he might be taught somewhat of the *Secret of Secrets*: and that he met with some Philosophers, but they were onely erroneous Vagabonds and great

Impostors; also that at length (after he had erred an hundred times, although he wrought in and with a true Matter) he perused *Artephius*, and out of that Book learned the *Secret Fire*; which if he had not done, he had remained perpetually ignorant.

From all which it is sufficiently clear, how much it concerns an Artist to have knowledge of the *Secret Fire*, *Luting* of *Sapience*, or *Hermes Seal*. Our Fire is indeed insignized with three Names, yet it is no other than one Being, *viz. Oil of Vitriol, by the fixed Sulphur of Tartar, coagulated into the form of a Stone*.

But why I here so clearly describe an *Arcanum* of so great Magnificence, and also publish the same, I have several weighty Reasons. Yet, in the mean while, I am not at all solicitous or carefull thereabout, for fear it should become too common, because of an hundred Readers that read and peruse the same, scarce one of them hating labour will give credit to the Prescripts thereof; and some others (who loving labour would credit what is here written) yet perhaps will want the acuteness of a Philosophick Ingeny, by the dexterity of which to institute and absolve such a fixation. Wherefore I rejoycing in that, do confidently and securely acquiesce, that the Art will not so easily be rendred familiar to every Son of the Earth promiscuously without distinction; but Art will still be and remain Art. Some years ago I did demonstrate to the sight of some of my intimate Friends the way pf Preparing the *Mercury* of *Antimony*, and commended to them the Fixation of the same by our *Secret Fire*; but they unto this very day have never set their hand to the Work to elaborate it; and that perhaps because it seemed to them to be too vile a thing, and not such as was likely of that it could be prepared, a Medicine

of so great Excellency.

Here in this Treatise I have taught the way of Preparing, by the help of Oil of Vitriol, a particular and famous *Salmiack*, by the benefit of which, from Metals and Minerals may be prepared, not onely an Universal Medicine healing all the Diseases of Mortals, but also a particular Tincture for meliorating imperfect Metals. I have indeed spoken many things, but not all as yet; because I there had no other intention, but onely to discover our *Secret Salmiack*. If I would proceed farther, I could certainly say, that in the most despicable Urine of Men a most pretious Treasure lyes hid, although the greatest part of the Possessors of it know nothing of the same; because God, by reason of their Sins, will not impart this Secret to them. In the Urine of every Man is latent a certain living Metallick *Mercury*, which may thence most easily be extracted by the help of a certain pure Metallick Body, or by the Assistance of Art be prepared into a Tincture, or Universal Medicine; according as we above taught, where we treated of *Mercury*.

Wherefore writing, I write and will write, that no Man in very deed can call himself poor, because God hath conferred on every Man from his first Nativity so great a Gift, as being brought forth into the Light of this World, he may have sufficient wherewith to live, provided he understands, and is able to perform what are to be performed. Philosophers affirm, that *Adam* and *Eve* brought their *Stone* with them out of *Paradise*. But to us it is sufficiently manifest, that they were cast out naked, without all help and comfort. Therefore you infer they bore such a Treasure in their Bodies, as is seen by that of *Morienus*, who being asked by King *Calid*, In what

Subject that famous Stone of Philosophers lay hid? Answered; *In thee, O King, it is hidden*. And farther, so soon as he had prepared the Medicine, he writ about the Vessel in which it was; *He that carries all things with him, needs not the help of another*: Signifying, that he needed not the help of any King, because he had all things in himself. Having done this, he returned to his Hermitage, and there blessedly passed the residue of his Life in the study of Temperance, Prayer and Fasting, always glorifying the Name of God. For if *Morienus* had not known that he had about him an inestimable Treasure, without doubt he would not have left the King so secretly, but perhaps have waited in hope of some Magnificent Entertainment: yet he thirsted not after this, but going away acquiesced in that onely, which contained in himself, God had long before conferred on him when he entred this World. It is sufficient for me that I have not buried my five Talents (lent me by God) in the Earth, but have restored them to my Lord, and have also so improved the same, as I have gained other five Talents.

Before I conclude, I am willing to say this: I have indeed received of God other five Talents also, but as yet have not gained five other Talents by the Usury of them; and that not because I fear the severity of my Masters Law against his idle Servants; but I fearing Evil from Men, durst not make any Improvement thereof, because I suspect that thence a great and incurable abuse would be spread far and nigh among the great number of wicked Men. Nevertheless, I now purpose to proceed in them, and that for certain Causes; and (with the assistance of God) as soon as I can to publish the *Magnalia* of the Almighty. Accordingly I hope this will prove a great

comfort and present help to the whole Christian Common-wealth against the *Turk*, the hereditary Enemy of the Christian Name, [*vid. Prosper. Germ. p. 5.*] But the summe of things to be communicated, chiefly consists in that, which certain artificial Inventions discover to me, by help of which many wonderfull things may be performed; and (if God so please) all the Nests of those Tyrannical *Hagarens* be laid waste, and so the Christian People be fully and plainly freed from their intollerable servitude. For if it shall be pleasing and gratefull to the most wise God, that such noble Inventions, hitherto unknown, may be divulged and put in practice; he alone hath power of procuring occasions and means for making them publick: but if it displease his glorious Wisedom, in his Name the Art shall be buried with me, or rather be returned to Him, as to the Fountain of Fountains, from whence it flowed to me.

In the mean while, I could not chuse but leave to Posterity, for a Remembrance of my Benevolence, something worth the minding, touching such unheard-of, heroick, efficacious Inventions. But these are written as in a Parenthesis, and by the way. Proceeding, let us discourse a little farther of despicable Urine.

All Men and Beasts live of the Dungs of Animals; also no Corn, Wine, Apples, *&c.* would be produced, if not dunged with the Dungs of Animals. But some one may object and say, Wild Herbs, Trees, Shrubs and Reeds are not dunged with the Dungs of Animals, as Vineyards and Corn-fields. I answer. Those Plants enjoy and have another Dunging, *viz.* Celestial or Rain water, by the benefit of which in Autumn and Winter, Branches and Leaves falling off from the Trees, do putrefie, and become Dung; which

kind of Dunging, in the Spring time betakes it self to the Roots of Trees, that a penetrative Dunging and procuration of increase may there be made, since the Leaves are to be esteemed the Excrements of Trees, with which they are refreshed and renewed. Why then may not the Excrements of Man serve for the Renovation of Man also?

No Man can deny, but that the Dungs of many Animals have been used in the Galenical Shops of Apothecaries, for the Composition of various Remedies, and are used at this very day. That in Urine is incited a singular comforting Virtue, they best of all can witness, who Shipwrackt in the Sea, have lived for certain days without Meat or Drink, and in the mean while have sustained their life with the use of Urine onely.

Also, that Urine is an egregious Preservative against the Pestilence, the Masters of Hospitals can witness this by all Men labouring with the Pest.

Now if gross Urine, with which so much impurity is mixt, be of so great efficacy, what may not its Spirit purified, and its volatile Salt effect, especially, if before Distillation, the famous Essences of Vegetables be artificially added, because such Virtues of Herbs, Flowers and Seeds, Woods, *&c.* by the help of the volatile Salt of Urine, are excited through their whole Body, to exercise there their Virtues efficaciously.

Whosoever knows how rightly to prepare, and duely to use Spirit of Urine, may easily thence get ample Riches, and reap no less profit in Medicine than in the Transmutation of Metals. Wherefore I here openly confess, that in this little Treatise I have posited certain Processes, which (as to their external face) seem to be of small moment, yet to Men skilled

in the Theory and Practice of them, they will find so gainfull a Work, as no Handicrafts man whatsoever can gain so much by his Craft. So much gain may be hoped for from Urine onely, if rightly and knowingly handled according to the Spagyrick Art. Because every one Man may gain not one, but several Imperials by that Art: the Processes of which are diverse, and that by the onely help of despicable Urine. Hence are those frequent complaints of Ancient Philosophers, that their Matter of the Stone is cast away by Fools among Dung trod under foot and contemned, which notwithstanding ought to be honoured by every Man. I say, by *Every Man*, because from it the Philosopher extracts his Universal Medicine, and the Physician his particular Remedies. For the Chymist transmutes vile Metals into better, and so consequently every Mechanick Operator may expect some Fruit from the same. Wherefore Urine is not to be despised, but to be taken into use; insomuch, as every drop of it that is spilt should be bewailed. Yet I protest I would not discover this, but for the sake of those that have Ears to hear; because other Men naturally deaf to such things, can reap no profit by this my Doctrine, because *Hippocrates* forbids to give Medicine to those that are past hope.

Whatsoever are here related touching Urine, may be said of the black shining Soot of Chimnies, of the Hairs and Horns of Animals, of Egg-shells, and the like, and especially of the Fæces of Wine, which are cast away after the Spirit is extracted.

But perhaps some Man may here say, Our Secret *Sal-Armoniack* is too costly to be used for the prescribed Operation. To him I answer. No Man can gain something for nothing. But whosoever is desirous to reap some Eminent Benefit, he must first

sow some pretious thing.

Indeed I confess, one pound of our *Salmiack* (if a Man onely follow the literal Sense, or bare letter of the Description) will cost several Imperials, because for one pound of Oil of Vitriol prepared, four or six pound of Spirit of Urine are required for coagulating the Oil with the same, which notwithstanding, in respect of those famous things which are acquired by the benefit of it, it is not to be judged costly. If a Man cannot prepare his Spirit of Urine, and Oil of Vitriol himself, but must buy them of another, he then indeed may complain of Dearness. But to one perfectly well skilled, the *Sal-Armoniack* will cost him little more than his manual Labour, insomuch as no Man hath any just cause to complain of charges.

If the divine Grace shall be pleased to prorogue my Life a little longer, I purpose to publish greater *Arcanums*. Therefore let God do as he pleaseth, his Will is always best, and better than the best Wills of all Men. *Amen.*

A Corollary.

Well-meaning Reader,

In this small Treatise I have in few words revealed great Secrets, such as were known to no Man before me, except Paracelsus*, who very briefly speaks of the chief of them. And* Helmont*, touching the great Virtues of that, hath writ many things. And since my* Sal-Armoniack *performs the same in all Operations, which*

Helmont *ascribes to his* Alcahest*, I am able to ascribe somewhat more to my* Sal-Armoniack*, than he ascribed to his* Alcahest*, yea, many things, which may profitably be performed by the benefit thereof, among which the chief is this,* viz. *that by help of it all Metals and Minerals may be reduced to their first Matter, that is, into a* Spiritual Mercury*, which is the highest Magistery in Chymistry.*

I, in this little Book, have onely prescribed a few ways of preparing Medicaments, and that in a Laconick-Style, became I writ these things in my Sick-bed. Indeed I could willingly and gladly forbear Writing, both now and heretofore; for by all that ever I writ, I never gained one half-peny. But Christian Charity inflamed me to consecrate this great Arcanum*, and the fruitfull use thereof, (before I dye, knowing in the Grave nothing can be done) and to publish the same for the good of Mankind remaining in the Earth; being full of great Hope, there will not want some Religious Spagyrists conscious of Piety, that will prove themselves faithfull disposers of this bequeathed Gift, and heal the Diseases of the Poor* gratis. *But if the great troop of Malignant Spirits presume to abuse the Practicers of this most noble Art, they may find* Nemesis *ready swiftly to punish them.*

Every one, as he pleaseth, may prepare most present Medicaments. For all Herbs, the way is almost one. Also in respect of Animals, Minerals, Metals and Stones, you will find but little difference. Every Man may himself more profoundly search into the Art. For my own part, I am at present so weak, as Strength faileth me to proceed farther in this discourse. Therefore, by every good Man, I shall be readily excused, because I have given sufficient occasion of searching into other high Secrets. If this my benevolent Communication suffice not any Man, he may

himself search farther elsewhere. For it is easier to add to things already found out, than to become the first Authour of new Inventions.

I had purposed in this little Book to signifie the most fruitfull use of my Secret Alcalisate *Spirit of Wine; which is so great a Secret, as no Man before me did ever discover to the World; but my Sickness hath prevented and hindred the doing of that. If God prolong my Life, that may be done in another small peculiar Book.*

Truly, I highly prize my secret Sal-Armoniack*, yet I more esteem the use of my Spirit of Wine Alkalizate; that being a Spirit of so great potency, as from all Minerals, Metals and Stones, it extracts a most pure Tincture, and by Alembeck brings the same over the Helm with it self. What shall I say? Even fixed Gold it self cannot resist it, but suffers it self without a Corrosive (like sweet Water coloured yellow with Saffron) to be drawn upwards. In a word, this Alkalizate Spirit of Wine is an admirable Instrument for a Physician, of it to prepare efficacious (yea incomparable) Medicaments; and he may easily acquire abundance of it, and that for no more charges, than after the common manner any other common Spirit is prepared. He that seeks shall find. Wherefore rise from your soft Pillows, and with smutted Hands touch black Coals, and accurately give heed to the institutions of Art. For with Idleness, Eating, Drinking, and playing on Musick, you shall never approach to great Mysteries. I would have you always think of this that is now once spoken. It is indeed impossible for a most unskilfull Man to believe or comprehend, how great things may be prepared by help of this burning Spirit.*

About the end of the Preface of this Treatise, I mentioned some few things touching the same; viz. *that of good burning Spirit, with little labour and no great*

cost, in a very easie way a true universal Medicine for humane and metallick Bodies might be made. This I would have no Man to doubt of, but to account of as most true. For I now ready to be laid in my Grave, have great need to be very carefull how I divulge any thing, unless such pure verity as experience hath taught me. If the most wise God will prolong my Life untill the next Summer, and enable me to write out of Bed, my purpose is to publish some other new wonderfull Works; but if in the mean while I be taken away from the number of the living, then (candid Reader) kindly accept of these few things here written.

This being thus imparted to all diligent Chymical Operators (whom I here salute and bid farewell) I wish a Divine Benediction in this Life, and Eternal Glorification hereafter. Amen.

Glory to GOD onely.

The End of the Seventh Part.

THE FIRST APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

In which is contained, how many, yet greater, Secrets may be prepared by the *Alcahest*, or Secret *Sal-Armoniack*, than those which are mentioned in the Seventh Part of the *Spagyrical Pharmacopœa*, *viz.* how Vulgar Mercury may be firmly fixed, and rendred totally constant in Fire, within the space of three Days. Also an Explanation, how by the benefit of it may easily be acquired the Mercury of Wine, as the highest Medicine of the World. Likewise, that the Secret Fire of the Wise, otherwise called the Fire of *Artephius* is the supreme Secret of

Secrets: Together with a Revelation of other admirable Secrets, of which the Authour hitherto hath made no mention to any Man.

To the Well-meaning READER.

I could not forbear to signifie to the Lover of divine and admirable Works, the Reason of my former omission or silence; namely, why in a little Treatise of mine lately published (which is intituled The Seventh Part of my Spagyrical Pharmacopœa*) in which I treat of my Secret* Sal-Armoniack *or Liquor* Alcahest*, I so suddenly broke off the Thread of my Writing begun, before I had any thing largely discoursed of the eminently excellent Vertues thereof, which it manifests not onely in Medicine, but also in Transmutation of Metals. Therefore, the Reason of my abrupt Cessation was as follows.*

Before I had compleatly finished the afore-mentioned small Treatise, I was assaulted with a grievous Disease, which incredibly prevailed more and more daily, insomuch as I totally despaired of recovering my Health, and therefore thought it necessary, that whatsoever was then written (how imperfectly soever) should for the sake of the Poor and Diseased be committed to the Press. But so soon as by the mercy of God, I was in some small measure recovered, I perused that little Book, and presently discerned, that the most powerfull faculties and virtues which that laudable Liquor is able to exercise and manifest both in Medicine and Chymistry, were scarcely in any-wise treated of, but almost wholly omitted in the same Book. Hence many conceited Men perswade themselves, that my Secret Sal-Armoniack *cannot be of so great Energy or Virtue, as* Helmont *ascribes to his*

Liquor Alcahest*; especially because He, in the Coagulation of* Mercury*, saith, that the same (when his Liquor* Alcahest *hath been but once abstracted from it) is so fixed, as a pound of it being tried by Cupell, leaves behind, after Trial, fourteen Lotones of good Silver; which indeed is not to be esteemed a vile Experiment,* viz*. that by so very little Labour (as is one onely abstraction of the* Alcahest*, which may be done in a few hours) such a volatile, and that the sole Deluder of all* Alchymists *should be transmuted and nobilitated into a fixed Metal, tractable and perseveringly sustaining every Examen of Fire; and that by mediation of such a substance, as the Liquor* Alcahest*, which per se is no other than a volatile Salt. Nevertheless, it is found, that the same may be done, and that not onely common Mercury, by our Secret* Sal-Armoniack *(which otherwise rendreth all fixed Metals volatile, and separates the most pure Souls or Tinctures of them from their gross Bodies, and carries the same over the Helm with it self) is transmuted into Silver; but also the same is endued with a Faculty of transmuting other imperfect Metals into good and constant Gold. The Truth of which Assertion I have not gathered out of the Writings of other Authours, but have learned the same by the continual Industry and Experience of my proper Inquisition; and therefore am able so much the more confidently to assert somewhat my self, touching the same, to every ingenious Man.*

But that you may know the Reason why Volatile Mercury, by my Secret Sal-Armoniack *also volatile, is rendred fixed and constant in Fire; you are to understand, that this onely is effected by the cleansing power and virtue of our* Salmiack*: for in Vulgar Mercury is somewhat ingenited by Nature, which makes the whole Body of it volatile. Now if any one doth well understand how to separate that therefrom by an Artificial cleansing, the flying Mercury no longer remains*

volatile, but assumes to it self an hard fixed, tractable and Metallick Body; in which kind of Purification to be made, our Salmiack *performs the office of a Master. Whence happens such a speedy fixation of Mercury; touching which we, in the following Praxis, shall more amply treat and demonstrate the same,* viz. *that so swift a Coagulation of volatile Mercury into Gold and Silver constant and abiding in Fire, is not to be accounted a vile work of small value, but to be esteemed as one of the principal* Arcanums *of Nature. This needs no proof, because by the sentence of all experienced Men it is long since notoriously known, that this noxious Deluder* Mercury, *by its volatility, hath deprived some thousands of unwary* Alchymists, *not onely of their Gold and Silver, but also of their Houses, Lands, Towns, Vineyards, Fields, Meadows, Gardens, and all their other Goods, carrying the same with it self up the Chimney, and leaving them nothing but an heap of broken Pots, Cucurbits, Glasses, Soot, Dust and Ashes, instead of the wealthy Spoils and rich Reward they thirsted after with vain hope. But as he hath evilly intreated the unskilfull and unwary Slaves and Drudges of Chymistry, so he hath dealt well with experienced and wary Philosophers, who (after they had observed his Inconstancy, and learned to amend the same) were such as he was constrained to obey, insomuch as they could subdue, bind and fix him. This is no Fiction or fabulous Tale, but a Truth which may be proved by many hundred true Histories, declaring, that in various parts of the World have lived those who were able to fix Mercury into a constant permanency.*

Of the more ample Use of our Salmiack.

Having in the precedent Treatise omitted the best and most worthy use of our *Salmiack*, (*viz.* that by the benefit of it *Mercury* might be so purified, as to be

very easily fixed into a Red Body fixt and constant in Fire) I was incited and moved thereby to commit this *Appendix* to the Press; especially because in doing the same, I could also upon every opportune occasion notifie several other profitable Secrets, which may be perfected by help of that; as here following you shall perceive, they being inserted one after another.

Therefore incline your Ear to hear what admirable Effects our *Salmiack* is able to manifest both in Medicine and Alchymy.

First, Our Secret *Salmiack* not onely purifies Metals, and separates the pure part from the unprofitable gross Bodies of them, but the Volatile parts it carries upward with it self; and afterward suffers it self to be again fixed [with them] into fixed Tinctures, as already in the precedent Seventh Part of our *Spagyrical Pharmacopœa*, we have very sufficiently proved, as well as in our Treatise of the *Three Principles of Metals*; but also it is endued with a power of carrying over the Helm the most fixed Gold, without any Corrosive, like to a yellow sweet Spirit, and of converting the same into true *Aurum Potabile*: for such *Aurum Potabile*, without a Corrosive adhering is found to be, not onely an efficacious, sweet and famous Medicine for humane Bodies, but also a true Tincture for transmuting imperfect Metals into better.

It is indeed a very great Question how such Gold can be a Tincture for other more vile Metals, since common Gold (according to the Opinion of many Philosophers, and the experienced truth of the matter) *per se* contains in it self no more Tincture than is sufficient for it self, and without prejudice to its own virtue or nobility is able to communicate no good to other Metals. Nevertheless, Philosophers

more acute, narrowly sifting the matter, have found that vulgar Gold, by the assistance of Art, may be destroyed, and its inside turned outward, but its outside inward: for such destruction Philosophers have called *Exaltation*, intimating, that the Exaltation or Melioration of Gold must be made in the Sign *Aries*; to which assertion I could never assent, but always believed and urged the contrary, inveighing earnestly against *Toletanus*, who writ *Animadversions* upon that good Philosopher of ancient Repute *Bracescus*, as if he had been a dull and obstinate Man, teaching in his Treatise of the *Tree of Life*, that the Universal Medicine might be prepared of vulgar *Mars*; for it not a little troubled me (after by a previous and continued study of reading and perusing the best Authours, I at length by the Grace of God, in my search found and learned the way of making such a Tincture and Medicine) that the said *Toletanus* did so unhandsomely heighten his Style against the laudable *Bracescus*, and contemned the famous Industry of that man, insomuch as I have, in some of my Writings (although with a certain Zeal, which I ingeniously confess was unseasonable) chastized this *Zoilus*, because he with an impertinent Presumption did so rashly and arrogantly attempt to oppose and contradict that, which he himself had not sufficient Experience of. But it happened, that afterward such an Exaltation of Gold fell into my hand unexpectedly. Whence, seeing such an Exaltation of Gold to be true, I repented my own folly. Wherefore now I openly confess, that by the help of our secret *Salmiack* I have very often elaborated such an Exaltation of Gold in the mineral Aries; although in a very small Quantity, finding that to be sufficiently imbibed with the Colour of Gold, whensoever onely two or three Grains of such

exalted Gold were mixed with a whole Pound of common Water. But in metallick Transmutation, during these days of my indisposedness, I could never yet try any thing further. If the most wise God, shall be pleased to restore and raise me out of my sick Bed (as I hope this next Summer he will) I will not omit to try what the aforesaid exalted Gold is able to effect in the Transmutation of Metals. In the mean while I am perswaded, that it will prove an amply potent Tincture for *Mercury* and *Luna*, and thence I divine because two or three Grains of such exalted Gold do tinge a whole Pound of Water with a golden Colour that the same must be done with *Mercury* and *Luna*. Therefore no man hath cause further to doubt, that common Gold, by the help of our *Salmiack* in Aries, may be reduced into some one true and fixed Tincture; as here following (God willing) shall be shewed more at large.

Of the more largely fruitfull use of our Sal Armoniack *in Medicine and Alchymy.*

My Preface to the seventh Book of my *Spagyrical Pharmacopœa*, mentioneth how the *Mercury* of Wine may be separated from any pure burning Spirit, and perform the Office of an universal Medicine healing men and metals. But since in such a manner of preparing the Medicine as I there prescribed, very little *Mercury* of Wine will be gotten, not enough to satisfie those, that desire more abundance, because from one Pound of Spirit of Wine, scarcely three, four or five Grains of most pure Cœlestial Salt are extracted; which nevertheless is not to be esteemed so exceeding small a quantity, if any one shall with a more accurate search of his mind well weigh the incredible medicinal Vertues thereof, which it manifests and exerciseth against humane and

metallick Diseases; insomuch as (in either Faculty) in the whole nature of things you shall find no Medicament like unto it. Certainly it is a true Cœlestial Medicine, in the form of a certain white sweet Salt, for if one onely Grain of it be taken into the Body of a Man diseased, he will thereby be notably comforted in all his Members, and amend and find himself better in a moment. I must needs confess, that I have not long since found out the Preparation of the same (during the long continuance of my Disease) by various Speculations; and when by reason of my Sickness I could not rise out of my Bed to prepare this noble Medicine my self, I committed the same to the hands of my faithfull and trusty Friends to be by them prepared, but in a very small quantity: For I caused not above two or three Pound of Spirit of Wine to be burned, and thence could not acquire much *Mercury*; nevertheless I found so much therein, as sufficiently to content and satisfie my mind as well in Medicine as in Alchymy; believing, as I have above mentioned, that no Medicine more excellent than this can be found in the whole nature of things. Moreover, every one may consider with himself, how great Salubrity such a Cœlestial Medicine may bestow and confer on the sick Bodies of Men, as often as he accurately weighs with himself the Subject (*viz.* Wine) of which this Medicine is prepared. For it is known through all parts of the World far and nigh, that under the Sun is not given a more excellent Cordial Subject, than good and pure Wine; although that abound with many inefficacious Humidities, and other Tartarous Feculencies, whereas on the contrary the *Mercury* thereof is most pure, or a sweet Cœlestial Salt is extracted from good Spirit of Wine deduced to the highest purity. But some one may say, what Spirit of Wine? If in that

such a noble *Mercury* be latent, and the same as it is in it self be given for comforting the Sick, what need is there, that it being kindled should be burnt; and why may not (without that labour and charge) its volatile Salt be received in a Refrigeratory? In answer hereunto let him know, that Spirit of Wine is almost all a mere Sulphur, and therefore is easily inflamed and devoured with the Flame, as is common to every Sulphur, *viz.* that so soon as it is set on Fire, it consumes it self, and leaves behind it no other than Ashes and a fixed Salt; but the *Mercury* which adhered to the Sulphur, is dissipated in the Air with the Flame, unless it be taken in a Cold Receptory, in which it may cool and condense it self. Indeed we for certain know, that no one of all the three Principles of Vegetables, Animals and Minerals is totally pure, but it always invisibly bears about it self some small part of the other two Principles, as may best of all be seen in combustible Entities, such are Wood and other Vegetables; for they being kindled and set on fire, the Sulphur is onely burnt, but the other two parts, *viz.* the fixed Salt, and the volatile *Mercury* remain free from Combustion. As for Example, if you burn Wood, an Herb, or any other kind of Vegetable, the Sulphur onely perisheth, but the *Mercury* adheres to the sides and walls of the Chimny. If you thence separate the Ashes and other Filths, which fly together upwards, you will obtain a white volatile Salt, altogether like the Animal volatile Salt of Urine, except in this onely, that this volatile Salt savours of Adustion. The fixed Salt is extracted out of the Ashes by Elixiviation of common Water. Moreover Animal Entities being burnt, *viz.* the Bones of any Animals; the Sulphur is onely burnt, but the volatile Salt flies away, and almost no fixed Salt remains in the Ashes. Lastly, common mineral

Sulphur being burnt, almost all the Sulphur vanisheth into Air like a Flame, and together with the Flame an unburnable *Mercury* ascends, in form of an heavy Corrosive Oil, which by Chymists is vulgarly called Oil of Sulphur, and is received in Glass Campanes; nevertheless that Oil is by Philosophers named the *Mercury* of Philosophers, because such Oil is easily transmuted into a sweet Fusile Stone, of which my lately published Treatise of the Salt of Philosophers makes some mention. From all which you may clearly gather, that there is no Sulphur found so pure, but that it is impregnated with some small part of Salt and *Mercury*; also you can find no *Mercury*, in which is not incited some part of Salt and Sulphur; and in like manner no Salt, to which a little Sulphur and *Mercury* adheres not. Which being thus, why may there not latently be in Spirit of Wine an incombustible Salt and *Mercury*? And as Spirit of Wine duely rectified according to the Precepts of Art, is found to be the purest of all other Sulphurs, and endued with no Feculencies; so also necessarily, when that Sulphur is kindled and burnt, with the Flame must needs ascend as it were an unburnable Substance, which may be received in a Refrigeratory for amending humane and metallick Bodies. Whosoever cannot comprehend and believe these, he truely and condignly may be called a Blockhead, although by his Flatterers (men very indiscrete) he be accounted even the Eighth of the Wise men, or a second *Paracelsus*.

I purposed in my mind to communicate this supream Medicine to some candid Friends, that some present Medicine may thence be made, by the salutary help of which, I also in this my declining Age, and in the Diuturnity of my Disease, may be made partaker of some Relief, since I my self now

sick in Bed, am able to prepare nothing.

Indeed I did formerly reveal this so very great Mystery to some of my old Friends, and that to the end that they being sound and in health might labour therein, and after their Work was ended (which might be compleated in Eight days) communicate to me, as an Offering of thanks, some small part of that Medicine, that my old infirm Body might be comforted; but their intent was far otherwise: For these rude men would not suffer me to participate of one Grain of the Medicine revealed, nor ever came within my Doors so much as once, after they were fully and plainly instructed in the Art by me taught; but passed by as if I had been a man wholly unknown and never seen by them. But this was to me a very just and truely deserved Recompence, because I being too credulous, did so vilely cast into the Mire the most noble Pearl of all Medicine, not considering the faithfull admonition of the supream Master: Beware of Men.

I must needs confess that it is not a Work for covetous men; because such thirst after nothing else, but a great Mass of Gold, and think this most noble Art to be no other than a rotten Thread. In like manner I do also confess, that common Spirit of Wine gives forth from it self but a very small quantity of such Cœlestial Salt; yet a great quantity of the same no man hath need of, because the power and efficacy thereof shews it self far and nigh. If any one be desirous to acquire to himself a greater quantity of this our Cœlestial *Mercury*, he may obtain his desire, if he make use of a good medicinal Restorative Subject, as Sulphur or Antimony fixed to a Redness, also Gold, Pearls, red Corals, cast Skins of Serpents, *Boletus* or *Fungus Cervinus*. If these and the

like restoring or renovating things be extracted with Spirit of Wine and the same Wine burnt: because in doing that, with the Flame will ascend a most pure mercurial Salt, which must be received in a cold Recipient.

In like manner all Metals, when they are duely extracted with Spirit of Wine, do in burning give forth from themselves a volatile mercurial Salt, which may profitably be administred, as well in Medicine as in Chymistry. For the Salt of *Saturn* is a most present Pestilential Remedy; the Salt of *Venus* an efficacious Venereal Medicament, the Salt of *Luna*, a most excellent Cephalick, the Salt of Gold a famous Cordial, and the Salt of *Mars* an admirable Stomach Remedy, and a true Tincture, by the help of which vulgar *Mercury* and *Luna* may be tinged into Gold. But it cannot profitably be adhibited in metallick Labours, unless it be first reduced to a red Fixedness by the benefit of common Gold, being such, as after the first Preparation may be very easily fixed and rubified; although it all ascends in a white Flame, and the Preparation be from a red Subject. For it is fixed and waxeth red, if any one do from it but once abstract the Water of *Saltaberis*, as *Paracelsus* calls it. But if you ask what *Paracelsus* his Water of *Saltaberis* is, it is not my purpose at this time to publish and divulge that kind of Water. *Helmont* vastly erred, when he thought it to be the Water of Whites of Eggs, which it is not, but it is a Water preparable for a very small Price, as much as is sufficient.

In the mean while, no unskilfull Man is able to believe, with how great a property of purging, elevating and fixing the Flame of good Spirit of Wine is endued. Therefore, whosoever is desirous of knowing this, by putting his hand to the Work let

him make Trial. The Flame of this burning Spirit renders all corrosive and bitter metallick Subjects sweet and pleasant; therefore *Lully* rightly said: *The immature Bitterness is to be dulcified, that the whole Magistery may be obtained*. Briefly I say, by the benefit thereof, so great good may be performed as is difficult to be believed, unless any one before he sets about the Work hath beheld the Event. In which at present we acquiesce, yet out of an abundance shewing this, *viz.* that, whensoever any man hath a mind to subtilize metallick Subjects by a burning Spirit (distilling or subliming them into sweet Salts or Tinctures) he is obliged by no necessity at all, to use no other than Spirit of Wine onely; because a burning Spirit of Corn, or extracted out of other Vegetables, will do the same. But whosoever would without Metals acquire a Sweet medicinal *Mercury per se*, he must prepare that of the Spirit of sweet Wine; because other Vegetables afford not so much mercurial Salt as may be had from Wine; which is to be kept in mind as a thing worthy of Observation.

Thus have I here clearly revealed as high a Medicine as ever was or can be found in the Nature of things; which no one of the Philosophers before me did ever presume to do. Indeed *Albertus Magnus*, and his Disciple *Thomas Aquinas* have written of it somewhat more clearly than others, yet so, as few Readers can follow the mind of them. For they do indeed make mention of Spirit of Wine, yet the Instrument under which it is to be burned, they did not in any wise express, or hint at. *Basilius* taught that the Instrument was to be made of Copper; yet this kind of Instrument is not every way conducible, but there is some defect in it. As for my self, I long sought with earnestness, before I could find a fit Instrument, in which I might receive this Cœlestial

Salt and *Mercury*. Let others after me also make the like search, till they find. It is not my business at all times, to cast all things at the Feet of the unworthy. For I am forbid by the Fates, having already divulged more than enough. But whosoever is desirous of learning more touching this kind of labour, let him peruse *Bracescus* in his Treatise of the Tree of Life, touching our mercurial Water, where he may find things enough worthy of note to yield him content. *Avicen* indeed writes also excellently, but very briefly. *Cosmopolita* and *Neusementius* have writ somewhat more clearly in their Books, yet with so Philosophick a Character, as scarcely one among a thousand Readers shall there find what he seeks. More at this time touching this it is not lawfull for me to discourse; but of other things here to be treated of, let every one comment and meditate what he thinks good.

Of the further use of our Salmiack.

In my lately published Treatise of the three Principles of Metals, I shewed how by the help of *Proserpina* the Wife of *Pluto*, a tinging Oil of a sanguineous Colour might be distilled from the Vitriol of *Mars*, and thence be coagulated into a sweet Fusile Stone, by the benefit of which great things may be effected in the Transmutation of Metals and Gems. But what is understood by *Proserpina* I considerately concealed from the Reader, as well as the Coagulation of the red and white corrosive Oil of Vitriol into a sweet Stone, because at that time I purposed not to publish any thing more thereabout. After that Publication, certain Rivals of our Art came to me very earnestly intreating, that I would also reveal to them *Proserpina* and my Coagulation of Vitriol: These men by their perswasive Intreaties so softned my mind, as

I was freely willing to gratifie them, but with this Condition, *viz.* that so soon as they had elaborated the whole Work, they should impart to me some small Portion of that Medicine, yet this promise of a thankfull acknowledgment hath not untill this day been fulfilled, wherefore I on the other hand fearing that so great a Secret (*viz.* how by the help of *Proserpina* the tinging Oil of Vitriol of a sanguineous Colour, tinging *Luna* into Gold, might afterward be coagulated into a Fusile Stone) should be exposed to publick view by those, that were so ungratefull to me, was resolved I would my self be the Publisher of so great an *Arcanum*, knowing always, that the Master is better able to discourse of his own Work, than the Disciple; not in the least doubting, but that by this Revelation or way of discovery, many Alchymists, reduced almost to the extream necessity of *Irus*, and ready to perish, will be able to recover themselves, and obtain their pristine repute among men. Therefore touching the Discovery of this *Arcanum* thus take it.

By *Proserpina* in the afore mentioned Treatise is understood the corrosive Oil of Antimony, or in defect of that Butter of Antimony, which (when added to Vitriol of *Mars* in like Proportion, and distilled by Retort) carries over with it self the Gold of Philosophers or Tincture of *Mars*, in form of a thick Oil of a sanguine Redness; which red Oil, when coagulated into a sweet Fusile Stone, will be very available in the Emendation of Metals, especially in tinging *Luna* into good Gold, as a little after you shall hear. These are briefly spoken touching the Antimonial *Proserpina*: Here following it shall be shewed by us, how our Secret Sal Armoniack may profitably be used instead of the Antimonial *Proserpina*, after we have premised the way of

coagulating the red Oil of Vitriol into a Stone not corrosive, by help of which Metals may be amended variously. As to the Coagulation of the red and white Oil of Vitriol, and also of other corrosive Liquors, that indeed is very easie to accomplish, but hard to find out. For all Philosophers have very obscurely writ of this kind of operating, in such a Laconick manner: Dissolve and Coagulate. The Solution of *Mars* into Vitriol is made by the help of common Oil of Vitriol, or else by Spirit of Salt. But the Coagulation into a tinging Stone not corrosive is made by the help of old, cold and dry *Saturn*, because he it is, that understands how with his own most intent Coldness and Dryness to extinguish all humid coldish Fires, and to change them into hard Stones.

No one of the Philosophers hath writ more clearly touching the Coagulation of mineral Spirits, than *Paracelsus*, in that Treatise which is intituled the Heaven of Philosophers, being that in which he treats of the Nature and Properties of the seven Metals, and in the Fifth Chapter of *Saturn*, he thus speaks.

Canon the Fifth, touching the Nature and Properties of Saturn.

Saturn of his own proper Nature thus speaketh.

The six other Metals have cast me out for their Examinator, and have thrust me from themselves out of the Spiritual Place: They have given into my Mansion a corruptible Body, that I might be what they neither are nor desire to have. My six Brethren are spiritual, thence it is, that they penetrate my Body as often as I am burned in the Fire; and together with me they perish in Fire. Sol *and* Luna *onely excepted, which are cleansed with my Water and wax proud. My Spirit is a Water*

softning the rigid and congealed Bodies of my Brethren. Yet my Body tends to the Earth; whatsoever is received into me, becomes also conformable to us, and by us is converted into one Body. It would not be profitable for the World, if it should know or could believe what are latent in me, and what I am able to effect. It would be more profitable for the World if it understood that, with me, which I am able to do: Then leaving all Arts of Alchymists, it would use this onely, which in me is, and by me can be done. The Coldness of a Stone is in me; this is the Water, by which I cause the Spirits of the six Metals to be congealed into one corporeal Being of the seventh, that is, to augment Sol *with* Luna.

These I have transcribed word for word out of *Paracelsus*, that by them it might be sufficiently manifest, that he knew how to perform the Coagulation of sharp mineral Spirits by cold and dry *Saturn*, because touching that he so evidently writes, as he that writes most plainly cannot describe the same more clearly, although there have been very few men, who did rightly understand this Prince of Philosophers, and could by his words learn the Coagulation of sharp mineral Spirits there touched, although in a particular Transmutation of Metals no method more easie can be given than by our Salt of Philosophers, which from red Oil of Vitriol is coagulated by cold *Saturn*. I will not pass over in silence, what Fruit may otherwise be reaped by the Benefit of this in the Emendation of ignoble and very pretious Stones; because by that kind of labour more profit may be gained by ten Fold, than in the Graduation of Metals into *Sol* and *Luna*; for our red Stone exalts all Gems in their Colours, and tingeth white Crystals into all kind of Colours; in which Work, there is not any of the Off springs of the Earth able to do the like. Wherefore the Ancient

Philosophers more esteemed this Coloration of Stones, than the Art of tinging Silver into Gold; For such a Stone not onely amends Metals, but also graduates small Stones noble and ignoble, and tingeth them into better shapes and colours. For more excellency and good lies hid in despicable Lead, than any unskilfull man is able to imagine or can perswade himself to believe; because the Inside of it is no other than mere Gold, insomuch as Philosophers have called it Leprous Gold.

So soon as this impure Gold shall be impregnated with the Antimonial Oil of Vitriol, and both conjunctively coagulated together into a red Stone, thence must necessarily be made a Tincture for Metals, as well as for Stones. Much more should here be spoken touching our coagulated red Oil of Vitriol: But to what purpose is it to bring a sample of beautifull Colours before the Eyes of a blind man, being such as he cannot see, nor is able to judge any thing of. [See this Process plain in *Proserpina*.]

In the seventh Part of the Prosperity of *Germany*, mention is made of a like Coagulation of sharp Spirits, wherefore I would refer every studious Lover of curious Arts to the perusal of that part. For what are here briefly treated of, are there more copiously handled, as every Reader may find, and apply to his proper Benefit. Time now admits not a more ample Discourse in this place, touching such sharp Spirits of Salt.

A Furthur Use of our Salmiack.

First, vulgar *Mercury*, by the help of our Secret *Salmiack*, may be so purified in the space of one Day, as the day following by one onely abstraction of the Water of *Saltaberis*, it may be coagulated into a red

fixed Medicine. Which swift Mortification, Coagulation or Fixation, was highly esteemed by *Paracelsus* and *Helmont*. This *Mercury*, *Paracelsus* insignized with the Title of *Coralline Mercury*, and celebrated the fame with this illustrious Praise, *viz.* that in the whole Nature of things, there was not any Remedy more excellent for yielding relief in the Gout and French Disease; adding, that it recreates the mind of the Artist, because it hath entrance into Gold, and with the same is converted into Gold, and so not a few impoverished Alchymists may again be stored with Riches. But since the Death of this Philosopher, you shall not find that there hath been one or other of the Professours of Chymistry unto this day, who could prepare such a red fixed *Mercury*; the Reason hereof is, because none of the Sons of Art could comprehend the Water of *Saltaberis*, by which *Mercury* is to be brought to a fixed Redness, none I say, untill *Helmont*, that most learned Philosopher of our Age discovered himself, witnessing that he also could prepare such *Mercury*, which he insignized with the Name of Horizontal Gold, affirming it would sufficiently supply whatsoever the Physician and Chyrurgeon should need.

In like manner, that most expert Philosopher *Nuysementius* did write of such a *Mercury*, testifying, that two or three Grains of it onely being taken in some Consortative, would purge out all Impurities from the humane Body. Indeed *Helmont* expresseth this in other words, yet by them intimates, that it purgeth out all Filths from the Veins. Behold three famous men, serving instead of the *Marpesian* Columns of all Hermetick Philosophy and Medicine; for they have excellently writ of this *Mercury*; yet to the Inventions of these, none of their Successours

have added any thing, but have been still and quiet, shunning the labour of preparing an Universal Medicine. During the eight Months I was detained in my sick Bed, by reason of my Infirmity, occasion was offered me of a more serious Meditation of such abstruse things, insomuch as I at length found the Water of *Saltaberis*, by the help of which I totally fixed *Mercury*, not indeed as *Helmont* saith into constant good Silver, but into very good Gold. Whosoever is seized with a desire of succouring the misery of the sick, he will do better for publick good, in using such a fixed *Mercury* rather for expelling the Cruelty of a Tyrannical Gout, and the French Disease, than for Gold making, unless so far as he hath need to use the same for necessary Aliments.

Whosoever desires to know more of this Coralline *Mercury*, or (according to *Helmont*) Horizontal Gold; let him peruse our little Treatise intituled the Seventh Part of the Spagyrical Pharmacopœa, where he may find not onely many *Mercurys*, which are not inferiour to this, but in many things excel it. Also there you are taught how a burning Spirit may be distilled from all Vegetables, and with such a Spirit, by kindling and burning it, the *Mercury* of Wine be separated from the Sulphur in flame, and that as a pure Cœlestial Salt be gathered in a fit Recipient, and administred against all Diseases, as a supream Universal Medicine. Also there is taught the way of purifying *Mercury*, and depriving the same of every loathsome Taste and Odour, in such wise, as it is rendred sweet and pleasant, like to Fire consuming Diseases, and for correcting every Cachexy of the whole Body. In like manner the same teacheth the way of preparing *Mercury* so, as it offers it self to be ripened by the Secret Fire of *Atrephius* into the highest Medicine, and that in a short time with little

labour and charge.

Hitherto I have variously treated of the manifold Use of our Alcahest; but since this kind of Doctrine may profit Junior Physicians, Apothecaries, Chymists, and other learned men more than Mechanick Artificers; I purpose here to subjoin some other Secrets also, which may be of use to the People, that so our *Alcahest* may become *Onesimus* the common Servant of many, and in this manner be verified what in the superior or precedent Treatise is mentioned, *viz.* that of despicable Urine all men of all Orders, when they will may reap profit, and sufficient Aliments. But, although Spirit of Urine alone, without the help of Oil of Vitriol, or some other Acid Spirit, cannot effect all that is to be performed, yet the labour of making Oil of Vitriol is not to be eschewed, since it is that which may be prepared in abundance with little charge, and almost no trouble. If any one be but a little more skilfull, than a common Chymist, then indeed he may prepare at least four pound for the charge of one Imperial. If you cannot perform this work, Oil of Sulphur offers it self, which is more conducive for preparation of the Liquor *Alcahest*, than Oil of Vitriol, and in a peculiar Furnace, of an hundred pounds of Sulphur, without any great trouble, you may easily prepare ten or twelve pounds of Oil, and that for a small charge.

Wherefore, whosoever would by the benefit of the *Alcahest* elaborate any thing to profit, he must first be provided of, and furnished with Spirit of Urine, and that some quantity, and also not a little Oil of Vitriol or Sulphur, ready for future use, that without any delay or hindrance he may happily proceed in his work begun, which without these he cannot

absolve. If Spirit of Urine and Oil of Vitriol be to be bought by any one, his *Alcahest* will be too dear, of it to prepare much to profit, as by the following shall appear.

What is that which *Pontanus* saith to this? The whole body of Mercury, without any previous Separation of the pure from the impure, may by the help of the Secret Fire of *Artephius* be totally ripened into a fixed Medicine or Tincture, without any diminution of its weight. Touching which wonderfull fixation, I in my Sick-bed made a small trial, insomuch as now I am obliged to believe what *Pontanus* affirmed touching such a Secret Fire; openly confessing, that the same Secret Fire is more to be esteemed in Medicine and Alchymy, than all other great Secrets, which have ever been observed by Philosophers. Wherefore now, nothing grieves me so much, as that by reason of my great indisposedness, being always constrained to keep my Bed, I am able to make no further trial of the same.

This Fire converts all venomous Subjects into salutiferous Medicaments; fixeth all things that are volatile; renders all sharp and bitter things sweet and pleasant. In a word, this Secret Fire cannot more properly be compared to any thing, than to *Titan* or the *Sun*, whence all things draw their Life and Increase. For that Fire, first of Earth, Water and Air, produceth gross, bitter and harsh Fruits, then ripens them being unripe, and changeth them into sweet and pleasant Fruits, imitating the *Sun* producing sower Grapes, which it sweetens after its various Operations upon them. The same may be spoken of the maturation of vulgar *Mercury*, being such as *per se* (whilst it is as yet volatile) is to be esteemed an immature and bitter Fruit: but as soon as by our

Secret Fire its Bitterness and noxious Venome shall be taken away, and it becomes fixed and able to abide the Examen of Fire, it is no longer a bitter Venome, but passeth into a salutiferous Medicament. Hence the worthy *Lully* cried out; *If you dulcifie the bitter, you will have the whole Magistery*. Which Dulcification our Secret Fire is able to compleat as perfectly as the *Sun* of all acid and harsh products of Trees, makes sweet, pleasant and salubrious Fruits. *Pontanus* witnesseth, that he had laboured in the true matter of the Stone, yet that he erred more than an hundred times, and that he should never have returned into the Royal way of Infallible Operation, if he had not read *Artephius*, and of him learned the Fire of the Wise. This indeed is a thing to be admired, that almost no Chymist imploys his Care, Study, Meditation and Counsel to seek out and find our Secret Fire, although to it there is scarcely given another like and second in all the things of Nature. *Artephius* did so clearly describe that Fire, as you would wonder that so few Searchers have ever comprehended his Mind. All other Philosophers, who were partakers of such a Fire, do with *Artephius* expresly write, that it burns continually in their Glass, and not so extrinsecally, in one degree. Whence indeed it is sufficiently manifest, that the same is not common Fire made of Wood and Coals. Therefore I do positively say, that our Secret Fire, in a short time, is able to transmute the whole of *Mercury* into a red, sweet and pleasant Tincture, and also to change both humane and metallick Bodies.

Yet further, Touching the most fruitfull Use of our Alcahest*, bringing great Gain in Metallick Labours.*

As we have heard that volatile common *Mercury* is

fixed and rendred constant in Fire, by the help of our *Alcahest*; so it also in such wise fixeth other Minerals, and volatile Metals, as the same in Cupellating, leave behind both *Sol* and *Lune*, not without notable utility. But thence especially may you reap vast profit, if volatile *Sol* and *Luna*, extracted by *Aqua Fortis* out of Sand and Earth, be again totally fixed by help of that, in such a manner, as they in Fire fly not; but yielding, permit themselves to be melted as any other *Sol* and *Lune*. Metals, whensoever wrought upon by the help of *Aqua Fortis*, although they were fixt before, degenerate into another Nature, and are volatilized, so as with a strong Fire of Fusion they fly away to the Owners great loss. As for Example: If you dissolve *Lune* in *Aqua Regia*, and upon the same Solution pour common Salt-water, the *Lune* will be precipitated from the Water in the form of a white Powder, which if with other Water you well edulcorate and dry, you will have a Calx of *Lune* much more ponderous than the *Lune* was before. Which kind of increase ariseth onely from the sharp Spirits of the Salt, which the Silver hath drawn into it self so firmly, as by the benefit of Water they could not be totally separated, but remain in it, not onely whilst it is heated red-hot, but also in a strong Fire of Fusion, insomuch as the *Lune* shews it self not tractable in Fire, as any other Silver, but remains like a Stone in that vehement Fire, so as whilst it is flowing, those Spirits of the Salt carry away much of the Silver with them in fume; and part of it also penetrates into the Crucible. Wherefore such *Lune* precipitated with Salt, cannot be melted again and made ductile Silver without great loss and detriment, but appears intractable like a transparent Horn, whence also it is by Chymists called the *Horn of the Moon*; but I in my Writings name this Silver (as being

that which is altogether volatile and fusible) the *Mercury* of *Luna*.

In the same manner also *Saturn* may be converted into a Liquable and volatile *Mercury*, touching the admirable and profitable use of which, I have writ, but not published, a whole Treatise, which is intituled, *The Work of Saturn*: but of this no more here. The Evening of the Day now approaching, admonisheth us to return to speak of our volatile *Lune*, and to shew the way of reducing that into fixed and soft or tractable Silver; which indeed by unskilfull Men is supposed to be a difficult Art, but by skilfull Men it is known to be easily effected with the great Utility of the Operator.

But some one may say, what need we about that imploy our principal Cares and Meditations, to render such precipitated volatile *Lune* into fixed and good Silver, since there are other ways of precipitating Silver from *Aqua Fortis*, viz. by the help of thin plates of *Venus*? To such a Man, I thus answer: They who commonly separate *Sol* from *Luna*, are in a great measure abused by that way of precipitation with *Venus* Plates; but they would never use that chargeable Precipitation, if they enjoyed the knowledge of any other more profitable. Chargeable, I say, is such a Precipitation to those that use it, because much Water must be poured into the Solution, for washing away or weakening the force of the *Aqua Fortis*, that the *Lune* may the more readily be precipitated by the *Venus*, and the *Aqua Fortis* also not dissolve too much of the *Venus*. By this separation the *Aqua Fortis* is lost, because it becomes Coppery, and unfit for a new use of separating. For one Mark of Silver costs in *Aqua Fortis* onely (not reckoning Labour and Workmanship) almost half an

Imperial: wherefore our *Belgian* Refiners think it worth their while, if for separation of every Mark of Guilt Silver, they spend but two *Holland* Florens, or ⅘ of one Imperial, for otherwise they cannot gain much: Yet some of them will not precipitate their *Lune* with the help of *Venus* Plates, and so lost their *Aqua Fortis*, but by distillation abstract the *Aqua Fortis*, and afterward use it again. But this abstraction is difficultly performed, and is not void of danger. For the Glass breaking, the Silver is spilt amongst the Sand, so as the whole cannot be recovered again without some damage, and sometimes there is great loss. Wherefore such a way of separating, although you can save part of the *Aqua Fortis*, yet it is chargeable and also dangerous (when *Aqua Fortis* is to be prepared in a great quantity, as is wont to be done in metallick Mines of Gold and Silver, and also in Goldsmiths Shops) because it requires a filthy toil, sordid labour, great expence, and a continual tiresome and perillous trouble. I add perillous, and that deservedly; because those Operators, who frequently separate with *Aqua Fortis*, do very often become *Peripneumonick*, and diseased in their Lungs, by attracting with their breath the Acrimony of those Spirits into their Lungs, with which sharp Spirits the Lungs being touched, are hurt, and rendred obnoxious to Putrefaction, insomuch as among those Separators you shall very rarely ever find an old Gray-hair'd Master. For such Companions, even in their flourishing Age, are untimely hurried out of this life. But what are these feeble wretches able to doe, in withstanding the great Power of Destiny? Of Golden-Silver, Moniers know not how to make Money before they have separated the Gold from it, how great cost soever they be at for separating the same. About two years since I writ touching a certain

Artificial method of separating Gold from Silver in abundance; but because I was taken sick a little after, and have continued discomposed almost ever since, I could not bring that laudable and most profitable Work of Separation to effect.

But afterward this my Infirmity continuing long, and I necessitated to keep my Bed, although troubled with no considerable sense of pain, could do nothing, but onely bend and incline my serious thoughts and meditations upon Nature and Art; then God and Fortune shewed me the way, by which every common *Mercury* may be fixed and rendred constant in Fire. Which sudden fixation of volatile *Mercury*, the Deluder of all Alchymists, gave me farther occasion of fixing other volatile Subjects also. But among others, I ordered trial and proof to be made of a volatile *Calx* of *Lune* precipitated with salt Water, that I might experimentally see, whether such volatile Silver might not be so bound up, as to suffer it self, like any other *Lune* to be melted without detriment or loss; the effect of which Trial or Proof succeeded according to my expectation. That indeed is a great Reward of a great Invention, insomuch as it supplies me with sufficient matter of asserting with *Archimedes*, It is an Invention worth the Milk of an hundred Kine. For this Fixation of volatile Silver will afford a famous Fruit of Utility in Alchymy, and especially in the Separation of Gold from Silver; because such a way the Separation of Gold from Silver may easily be made; *viz.* there being no need of the Solution of Silver by *Aqua Fortis*, but it is sufficient if the Silver be onely granulated, and the *Sol* which is in it extracted by *Aqua Regia*; because that being done, you will see all the Silver residing in the bottom. And although there should be half an Ounce of Gold in every Mark of Silver, yet you will

need no more *Aqua Regia*, than onely so much as is required for the Solution of such a quantity of Gold; so as a diligent Man, in the space of one day, may very well separate an hundred Marks of Golden-Silver, for the charge of three Duckets. And this artificial method of Separating may not onely be used by the Separators of Gold from *Lune*, but you may thence also reap greater profit, whensoever you are desirous by the help of *Aqua Fortis* to extract Silver from Stones, Sand and Clay, and to precipitate the same with Salt: for this way all the *Aqua Regis* will be saved, that *Aqua Fortis* by the addition of Salt being turned into *Aqua Regis*, which will be most powerfully conducent for extracting Gold out of Sand and Stones, and for precipitating by a Mercurial Precipitation of the Gold from the *Aqua Regia*, and afterward that *Aqua Regia* may again be used with notable profit for extracting like Gold. Touching which gainfull Extraction, the Seventh Part of the *Prosperity of our Country* largely treateth. Here my intent was onely to publish an Artificial, and not chargeable way of separating Gold from Silver; which is such a method, as I believe the World never knew before.

Thus this new-invented Work of Separation is a most profitable Compendium, by the benefit of which every skilfull Man hereafter may with a good courage labour, and increase his Goods and Fortunes honestly: for I believe there cannot be invented any new Work more compendious than this we have here alledged, for the separation of Gold from Silver: wherefore we acquiesce in that. But if any one would be more prolixly instructed in this Artificial Separation, let him peruse the above-recited Seventh Part of the *Prosperity of Germany*, where he may

satisfie the hunger of his desires. Here you have the *First Appendix on the Seventh Part of my Spagyrical Pharmacopœa*: but in the following *Second Appendix* (God willing) I will discover yet greater Secrets, which may be perfected by our *Alcahest*, but were never yet manifested to the World. But at this time, courteous Reader, take in good part these few things here premised, and whatsoever excellent thing shall hereafter offer it self, the same shall be presented to thy Consideration.

Therefore, since (as is above declared and shewed) our Secret *Alcahest* is able to enrich Mortals with many kinds of gainfull Emolument, he is in no wise to be reprehended, that aspires to the knowledge of elaborating so excellent a Work, *viz.* how he should prepare for himself Oil of Vitriol or Sulphur, and that in abundance for a very small charge: for nothing hinders, but that four or five pounds thereof may be prepared for the charge of one Imperial. I need not mention how Spirit of Urine may easily be had and prepared in abundance, *viz.* so soon as one shall cause Urine mixt with Quicklime to ascend in a large distillatory *Vesica*. For if any one shall so prepare his *Alcahest*, eight or ten pounds thereof, after his work is done, will scarcely cost him one Imperial: wherefore he must needs gain much more, than if he should buy the same of others that sell it, for a great Price. In the mean while I doubt not, but that such a most easie Coagulation or Fixation of *Mercury*, as is made by help of this *Alcahest*, will excite not a few of the more unskilfull Readers, to the love of Learning from expert Artists, the Art of preparing the *Alcahest* in abundance.

A Recapitulation,
OR
More ample Declaration of the precedent Secrets revealed.

Well meaning Reader,

Here in this Appendix I do indeed treat of very few Secrets, but those are very great, (which may be acquired by our Alcahest*,) the like of which no other Man before me did ever impart to the World. Now contemplate, and well consider with thy self this swift and not chargeable Fixation of* Mercury*, which so many famous and industrious Searchers have laboriously sought for many hundreds of Years now passed, as is known to the whole World. But the greatest part of them have sought in vain, and with a fruitless and unlucky endeavour miserably lost all their Patrimony and Fortunes, and become the Laughing-stock of other more happy Persons, being themselves Vagabonds, which cast an aspersion of Ignominy on the noble Art of Chymistry, and have rendred the same so odious every-where among the common sort, as no good Man (although he hath by most diligent search obtained some famous Medicine) dares to profess himself the Possessor of any Eminent* Arcanum *in Chymistry, lest he should give any occasion to* Aristarchical *Censurers of defaming him, and calling him a* Gold making Animal. *Assuredly it is very manifest, that in all Regions of* Europe*, and in every Age, have lived such Men most experienced, as have not*

onely transmuted Mercury*, but other vile Metals also into good Gold, sustaining every Examen of Fire. But this was done very secretly, lest the Artists themselves should fall into the hands of Tyrants.* Paracelsus*, that most famous Monarch of all Philosophers, Physicians and Chymists, did indeed openly write of the Fixation of* Mercury*, but in a Character so abstruse, as in all my life I never saw one Man who could fix his* Coralline Mercury*, or present it to the sight of sufficient and certain Witnesses, except* Helmont *writing, that he could prepare such* Mercury*, as in Medicine would perform all whatsoever the Physician should have need of. But that the same* Mercury *(as* Paracelsus *testifies of it from his own Experience) enters into Gold and augments that, and exhilerates many impoverished* Alchymists*, restoring them to a more fortunate state; touching these Effects of the same, the worthy* Helmont *made no mention; yet he writ, that he did himself fix* Mercury*, by one onely abstraction of his* Alcahest*, in such wise, as of one pound he had left in the* Cupella *seven ounces of good Silver, which indeed is a famous Work in Chymistry and worth while; but Gold is better. Truly I must needs confess, that I have often tediously laboured to no purpose in this Work, and never could with any profit extract good* Lune *thence, onely I always had a little good Silver. Nevertheless afterward, when I lay Bed-rid, and by reason of my four years sickness, had consumed all my Goods gotten by Medicine, it pleased the most wise God to confer on me so great a Light, at by the Splendor of that I found the Royal way of operating rightly; and now I am able in a very few days to fix any common* Mercury *into a fixed red Powder, which fixed* Mercury *will undoubtedly perform Wonders in Medicine. For* Paracelsus *writes, that the dolorous Gout may be radically expelled by the benefit of the same.* Helmont *subscribes, that the same will perform all a*

Physician can desire and wish for. Wherefore, if the same be of so great efficacy (for I doubt not the truth of his Assertion) no Physician hath need of any other thing than this; because in what part soever of the World he resides, it will supply him with Aliments sufficient, and he will have no need to expose himself to the ignoble servitude and arbitrement of another, as the greatest part of other Mercenary Physicians are wont to prostitute themselves for hire. For by this Mercury *onely he may acquire to himself Honour and Wealth enough, although he otherwise perform no great matter in Chymistry. In all Nations are found Men afflicted with grievous Diseases: of which no doubt is to be made, as a little after we shall hear. Wherefore it should be the onely care, study and endeavour of an honest and candid Physician to obtain such a fixed* Mercury*, in the mean while omitting all needless and vain Operations, together with all fruitless Disputes, without any Foundation, touching other unprofitable Remedies. Whensoever this is, there will be no need of* Galenical Medicines*, nor of the vain Pomp of so many withered, unprofitable and inefficacious Herbs, or so many painted Boxes, Pots and Glasses, with other frivolous Expences orderly placed in Apothecaries Shops.*

Now let us hear what admirable Effects our fixed Mercury *is able to manifest in Metallicks.* Paracelsus *writes, that it exhilerates every* Alchymist *reduced to a poor Estate, and hath ingress into Gold, and augments the same. My own Experience of this I am willing to impart to the Candid Reader, as far as I have proceeded hitherto. Therefore let the well meaning Reader know, that I found out this Art of Fixing* Mercury *no longer since than in* March *last of this Year 1667, and began to make proof thereof in the following Month of* April*; and so soon as I had found the Truth of it, I thought good to publish so great an Invention to the whole World. Yet in*

so short a space of Time, I could not search out all that was to be found, because by reason of my diuturnal Illness I was constrained to keep in my Bed; therefore I hastned the publication of so excellent an Invention, because I feared it would happen that the insalubrious Air of March *or* April *should be my Death, and so all hope of divulging such a Secret be totally frustrated. Whatsoever I found in the same within that small space of time, I have here communicated.*

I three several times perfected the Fixation of Mercury *in a small quantity, and always found it every time higher and higher, and more and more beautifull. This fixed* Mercury *I cupellated with* Saturn*, but my* Mercury *remained fixed, without any Ingress made into the Lead, insomuch as from it self could give no Gold. Afterward I made another Trial, and then to my fixed* Mercury *I added a little common Gold, melting them into one Mass, I found that this Gold from the* Mercury *had increased it self more than half; the remainder of my* Mercury *had made no Ingress, but remained lying like a Red fixed Calx. Which kind of proof fully satisfied my mind, because the residue of my* Mercury*, which had not entred into the Gold, was not lost, but converted into an excellent Medicine. If it please the most wise God to restore me to my pristine health, as I hope he will in the next Summers heat, I shall not acquiesce in this proof onely, but further try whether I can of this* Mercury *yet make some further improvement. In the mean while I sing Praises to the Immortal God for so noble a Medicine against the dolorous* Gout.

Thus, Reader, you have my Experience touching the Fixed Coralline Mercury. *If I find any other more excellent Experiment of this (as I doubt not but I shall) I will ere it be long make thee partaker thereof in a following* Second Appendix.

Whatsoever I have above prescribed touching the Mercury *of Wine, as being an excellent Salt, and Supreme Medicine, I did sufficiently explain, except the Instrument to be made for burning the Spirit of Wine, which is not yet sufficiently expressed.*

But here it is to be observed, that a burning Spirit extracted from Corn or other Vegetables, in no-wise yields so much Mercury*, as Spirit of Wine doth, and especially if distilled from rich Rhenish Wine. In like manner also so much* Mercury *cannot be had from any sweet* French *or* Spanish *Wine, as from Rhenish Wine. So soon as by search I found the reason of this difference, I could from any burning Spirit made of Corn, extract as much* Mercury*, as from Rhenish Wine, insomuch as I now (praise and thanks be given to God) can easily be without Rhenish Wine and any other. The supreme Giver of all good Gifts, from his inexhausted Fountain of Grace, hath abundantly refreshed me with good things; let him yet instill more into me, that I may again distill the same into other of his needy and officious Servants, who with me endeavour to publish the Magnalia of God.* Amen.

But proceeding yet further, we will briefly speak of the Secret Fire *of ancient Philosophers, being that by which they ripened their Tinctures. Therefore, for a Conclusion, let the Lover of divine and natural Wisedom know, that such a Fire is not made of Wood or Coals, but is a Firey-water, such as gives forth from it self neither smoak nor flame. The same is not hindred or excited by external Fire, but in the Glass, (about the Subject you intend to fix and dulcifie) it always burns in an equal degree, and converts the immature and harsh into sweet and pleasant, fixed and mature; and also converts bitter Venome into salutary Medicine and Treacle.*

Therefore, whomsoever God illuminates with so great

Light, as to know such a Secret Fire*, he will no more need to seek or desire any thing in Philosophy and Hermetick Medicine, but will offer up incessant Praises to God, as to the Fountain of all Good, because he will continually be mindfull of helping the Distresses of the Poor, and largely bestow on those Indigent Persons, out of the abundance to him accruing by the benefit of that most noble Gift granted to himself.*

To the Supreme GOD alone be Praise and Glory for ever.

The End of the First Appendix.

THE SECOND APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

Wherein is treated of the further use of our secret *Sal-Armoniack*, for the meliorating of the meaner Metals, and more particularly of the profitable extracting or separating *Sol* and *Lune* from *Jupiter*. With a subjoyned information how by means of the Mercurial Water of *Jupiter*, Tinctures may be extracted in quantity not onely from *Sol*, but also from *Mars* and *Venus*, and all precious, as well as common Stones; and that (as it were) in a moment, without Fire or any considerable charge.

Faithfully Translated out of the High-Dutch.

Kind READER,

In my foregoing first Appendix of my Pharmacopœa Spagyrica*, I promised a second concerning the further use of our secret* Sal-Armoniack*, that the ignorant as well as doubtfull might be fully satisfied of the truth. The reason why I rather choose to add two Appendixes to the said seventh Part, than to publish the secrets therein contained, under the title of the eighth Part, is because I have resolved not to go beyond the number 7 (in which something extraordinary lies hid) in any of my Writings. And forasmuch as I have already published six Parts* of the welfare of my own Countrey*; I intend shortly to add the seventh Part, which shall contain clear and full instructions, without concealing the least circumstance or manual operation how every one who is but a little skill'd in Fire, may with great profit extract from Sand and Stones,* Sol *and* Lune*, and thereby get a plentifull livelyhood in any part of the World. I have also at present in hand, the two last Parts of my Treatise of* Furnaces*, five of them being already in Print, that I may in that Piece also compleat the number seven: which two last Furnaces are extraordinary usefull; for in treating of the sixth Furnace I describe that Artificial Refrigeratory Instrument or Alembick, whereby the* Mercury *or Cœlestial* Niter *of all Vegetables, Animals and Minerals is caught by kindling Spirit of Wine upon them, by which means the said* Mercury *is separated from its gross Body, and unprofitable part, and becomes highly exalted and purified. Which instrument the Philosophers have always carefully concealed. The seventh part of my Furnaces shall contain the description of a little Furnace in which with a very inconsiderable quantity of Coals and in a few hours, distillation may be performed by Retort, being such a* Compendium *as has never yet been published to the World. In which Furnace also the Tinctures of Metals may with the secret Fire of*

Artephius*, or by the proper Agent of the matter of the Stone, in a short time be fixed and maturated. And if it shall please God to continue my Life a while longer, I intend to carry on these my following Works,* viz. The Mineral Work*,* the wonder of the World*, my* Centuries*, with other of my Writings, to the seventh number; but before I publish these I intend to Print some other Treatises,* viz. Of the second Terrestrial, and third Cælestial Purgatory*, and another* concerning God and good and evil Spirits.

Now as to the second Appendix, I intend therein briefly, but fundamentally to declare the true gainfull particular as well as universal transmutation of Metals; yet not so, as that every lazy proud Lubber may become Master of these secrets, and thereby strengthen himself in his Pride and Debauchery, by no means: but they shall be so laid down, that those who have attained to some skill of managing Fire, may easily comprehend the same; yea the whole World will, I hope, have cause to rejoyce for this my faithfull Communication. And in case there be any that might not find clear and full satisfaction in this my Appendix they may read my other Writings, particularly those yet to be published, wherein they will meet with a further Elucidation of these secrets.

And as for those my good old Friends who never basely complied with the Enemies of Art and Truth, to them I am (as I always was) ready to communicate a shorter and nearer way than it is fitting here to expose to every Man.

Of the further profitable use of our secret Sal-Armoniack *for the Melioration of Metals.*

In the seventh part of my *Pharmacopœa Spagyrica*, I have at large declared how our secret *Sal-Armoniack*

is to be made together with the use of it in the preparation of many excellent Medicines, hitherto unknown. And because therein I did not discover all, I added to it an Appendix, treating concerning the use of the said *Sal-Armoniack* and other profitable secrets. But forasmuch as the virtues of the said *Sal-Armoniack* are great and unfathomable, I have thought good to add the second Appendix, which speaks of its use in meliorating the meaner metals. I intend therefore in this writing to discover great things, neither shall the Worlds ingratitude deter me from so doing. I shall begin with *Saturn* and *Jupiter*, and afterwards treat of the melioration of other meaner metals, *viz. Mars* and *Venus*, how by Art their corruptible and combustible *Sulphur* may be separated from them, and their purer part, (*viz. Sol* and *Lune* which are hid in them) extracted and made visible.

Lead and Tin, to outward aspect do much resemble one another, save onely that *Jupiter* is whiter, for which reason the Philosophers have called it white Lead, *Antimony* black Lead, and *Bismuth* gray Lead; because all of them like Lead, easily melt in the Fire.

Concerning *Saturn* and *Jupiter* (being the highest Planets in the Firmament) the Heathen Philosophers have writ much in their Fables: as amongst other things, that *Jupiter* drove his Father *Saturn* from his Kingdom, and made himself Master of it and other like Stories; in all which they obscurely hinted to us the transmutation of Metals. For these Poetical Fables though they seem trifling and foolish to those who have not attained to any considerable experience in Fire, so that of one thousand Readers scarce one reaches the true ground of them, (though 'tis known they were writ by men of great learning

and experience) yet they whose understanding God enlightens find in them an hidden Treasure.

Now to the end I may not bury the Talent God has been pleased to bestow upon me, but improve it for the good of the World, I shall here discover the melioration of *Jupiter* and *Saturn* to the glory of God the Author of all good, and for the use of all mankind, without respect of Persons, whether they be Friends or Enemies: the good and virtuous will without doubt thankfully accept this my communication, and to the ungratefull and unworthy, this my well-meaning discovery of such profitable secrets will but heap Coals on their Heads. Wherefore it shall not repent me though it should come to the hands of my worst Enemies, as being sufficiently contented in this that I am any way instrumental in making known the wonders of God and nature to the World.

Thus in the name of God without envy or repining I proceed according to his command, to do good to Friends and Enemies, good and bad: if the wicked abuse any of these secrets, God in his due time will meet with them, and pay them in their own Coin. Follows now the nature and property of *Jupiter* and *Saturn*, according as they have been discovered to me by Fire.

Of the nature and property of Lead.

Saturn is an immature Metal, made up of much gross *Mercury* and little *Sulphur* which is impure. Its Salt much resembles Salt-peter, which is the cause of its coldness and easie fusibility. When its *Mercury* is purged from the impure *Sulphur*, it becomes like Gold in weight, and may by Art be reduced to the colour and fixedness of Gold. When its superfluous

combustible *Sulphur* and nitrous Salt from whence proceed its ready fluxibility, and piercing and devouring nature are separated from it, all true Philosophers witness that there the *Mercury* of Lead may be turned to Gold, for they call Lead their leprous Gold. Now as the Leprosie in Man proceeds from a cold moist and over Salt Constitution of Blood, which corroding the Skin and Flesh produces such an abominable Scab upon the Body, especially in those parts where moisture most abounds, *viz.* about the Nose, Ears, Eyes, *&c.* but where the whole mass of the Blood is become corrosive, there it spreads over all the Body sparing no part, but filling it with Sores and Ulcers; so as at length where no potent Remedies are used to mortifie this malign corrosive humour, it destroys the Body and Death follows. To cure which formidable Malady, the Ancients made choise of fixed Gold, as not being subject to any corruption, which wise intention of theirs is very preposterously imitated by our *Galenists*, who when they find that their helpless and unprofitable Medicaments want the desired success about their Patients, and that small hope of saving them is left, betake themselves to Gold, Silver and Precious Stones, for to help at this dead lift. But let such as these remember that they will find it hard to answer these their proceedings one day, by which they onely post their patients out of the World: for what can the stomach of any man, but especially of the weak and sick do with the filings or leaves of Gold and Silver, or the Powder of Precious Stones? can we suppose that the Stomach can draw any virtue from those things, that the most corrosive Waters will scarce touch? But this hath been so often inculcated by others, that it is matter of wonder, that such foolish and fruitless ingredients have not been

long since exploded and laid side, being indeed nothing else but the shame and reproach of Physicians; and all that can be said for them is, that they must be well paid for, and so help to make the Pot boil; without doubt when the promised *Elias Artista* shall come, he will put an end to all this unprofitable stuff, and instead therefore restore true powerfull Medicaments; to which good end I hope my *Purgatory of the Philosophers*, with *the Sixth and Seventh Part of my Furnaces* will not a little contribute. Thus it seems Truth must yet for a while be despis'd and oppress'd, till God, the truth it self, be pleased to raise up a mighty Hero to deliver it from Contempt, and Crown it with glory and honour.

It cannot be denied, but some experienc'd Philosophers, as *Paracelsus* and others have declar'd, that with Gold and precious Stones wonders may be done in Physick, when first they be reduced to potability; but have always condemn'd the use of their compact and fixt Bodies, which are insuperable by Fire it self, and therefore much more by the gentle heat of the Stomach. And indeed if those Physicians, who ignorantly make use of such gross and compact Bodies, did know the living Gold, Silver and precious Stones of the Philosophers, and the due application of them to the sick, they would by this means get more honour, and not be so injurious to their Neighbour, as they are, by exhibiting such unprofitable and hurtfull things for Remedies.

I cannot but on this occasion speak a word of the Leprosie and its cure; which being confessedly a Saturnine disease, may easily be cured by Saturnine Medicaments, such as are Black Lead, the *Antimony* of Wise men, or *Magnesia* of *Saturn*, being duely prepared. But to return to our Lead or Leprous Gold,

and enquire how we may best rid him of his Melancholy Leprosie, and instead thereof restore to him a healthy sanguine complexion, which can no way better be done than by evacuating his sharp corrosive blood, or dulcifying of it. For, as has been said, Lead contains a sharp sal-nitrous Spirit, which corrodes and devours all hard things, which the Ancients have intimated by their portraying him with a sharp Sythe in one hand, and in the other holding a young Child, which he devours; wherefore also he is called a devourer of Infants, and a ravenous Wolf. Which ravenous property he expresses to the life, when on the Cupel he devours whatsoever is added to him, and therefore is called an unmercifull Father to his Children, because he devours and destroys them. According to all Philosophers and Astronomers he is the highest and first of all the Planets in the Firmament, upon which account the other Planets and Metals, *viz. Sol*, *Luna*, *Jupiter*, *Mars*, *Venus* and *Mercury* are call'd his Children, though improperly, for they are his Brethren, which he devours, swallows and destroys on the fiery Cupel, except *Sol* and *Luna*, which though he swallows as well as his other Brethren, yet can he not concoct or digest them, but is fain to vomit them up again, and they are so far from receiving any hurt in the Stomach of that ravenous Wolf, that they come forth much purer than before, leaving all their filth behind them. So that this devouring Glutton, notwithstanding the corrosive acidity of his Stomach cannot consume Gold or Silver, but robs them onely of their superfluous Sulphur, which is the corrupter of the *Mercury* in Metals, of which *Paracelsus* excellently writes in his *Cælum Philosophorum*, which I have quoted in my first Appendix concerning the use of the *Alcahest*.

Now that there is a great acidity in Lead, appears from this instance; because when it is melted, it pierces the Crucible, and runs through; and therefore Cupels have been invented, made of Bone-ashes, which he cannot eat through, but sinks like water into them. Yet there are also Crucibles made of Coal-dust and good Earth proportionably temper'd together, which can hold *Saturn* in Flux for a year together, without ever piercing them: of which more may be seen in my other Writings.

This then is the Nature and Property of *Saturn*, he contains much, but impure *Mercury*, and a sharp corrosive Salt-peter Spirit; when he is rid of these, he affords good Gold and Silver, yet not alone and of himself, but with help of his Brother *Jupiter*, whose superfluous Sulphur kindles the Nitrous Spirit in Lead, and consumes it; so that by this enkindling, not onely the hurtfull Salt-peter in Lead, but also the superfluous Sulphur in Tin are both consumed and destroyed. This being done, if the Tin thus mixed with Lead be driven off on the Cupel, they will yield Gold and Silver enough for a competent livelihood.

If thou would'st be further assured that Lead contains a sharp Salt-peter Spirit, which by no other way can be taken from him, than by his enemy Sulphur, by whose means it is kindled and consumed, the following Experiment will give thee full satisfaction. Onely by the way note, that this consuming of the Nitre in Lead, does very much alter its Nature, making it hard, and of difficult fusion like Iron, so that great Guns may be made of it. Now the Experiment is this: Take of the filings of Lead three parts, of Brimstone in Powder one part, put them into a Crucible, surrounded with Charcoal, so as it may heat leisurely and by degrees; by this means the

Brimstone will penetrate the Lead, and mortifie its Nitrous Spirit, which is the cause of its easie fluxibility, and at the same time the Sulphur becomes mortified also, which before was more fluxible than the Lead, but now by its union with the Lead, is very hard to be fluxed. This mortification or induration of Lead, with common Brimstone, affords no Melioration, and is onely here instanced, to demonstrate there is a Salt-peter in Lead, and that Salt-peter and Lead, which both are so very fluxible, do harden and mortifie one another. But now when the Salt-peter that is in Lead is kindled and consumed by the Sulphur that is in Tin, then one Metal meliorates the other, and the hurtfull superfluity of both is destroyed, *viz.* the Nitre that is in Lead, and the Combustible Sulphur in Tin, from whence necessarily a melioration must ensue.

That Sulphur kills the Nitre in Lead, and makes it hard, thou mayst yet be satisfied another way, *viz.* Take some ounces of Lead, melt them in a Crucible, and ever and anon cast in a little piece of Brimstone into it; continue this till thy Lead be become hard and influxible, by which means thou wilt be assured that there is Nitre in Lead. And that there is Sulphur in Tin, appears in that when it is joined with Lead, they kindle and consume one another.

If thou desirest yet further to be confirmed, that there is Nitre in Lead, which makes it melt so readily, and fret through every thing; then do thus: Take Lead and melt him red-hot in a Crucible, and immediately he will pierce the Crucible and run out; take another Crucible and put Lead into it also, casting, as soon as it is melted, small bits of Brimstone upon it, which will so mortifie the fretting Nitrous Spirit in Lead, that he will be no more able

to pierce the Crucible, but will for a long time continue red-hot in the same.

If this demonstration neither will satisfie thee, that the fretting nature of Lead proceeds from a sharp Mineral Salt-peter Spirit, thou mayst further prove it thus: Abstract from two ounces of filings of Lead an ounce and an half of Oil of Vitriol or Spirit of Salt in a small Retort, in which operation the dry Lead will draw to it the sharp Saline Spirit, and that which comes over will be meer insipid Phlegm, retaining nothing of its former corrosiveness. The distillation performed, take thy Lead out of the Retort, and try whether it be become more sharp by the addition of the said Corrosive Spirit, but thou wilt find that the Lead has taken in the sharp Saline Spirit, coagulated it, and changed it into a sweet Stone, in which no manner of corrosiveness can be tasted or perceived. Now if this be true, that Lead can turn such a strong corrosive Oil into a sweet Stone, we need not wonder that he has a power to coagulate, hide, and make invisible his own in-born Saline Spirit. Concerning which matter thou mayst read more in a small Treatise of mine of the Principles of Metals, wherein speaking of the Coagulation of Saline Spirits, I observe that Lead has the nature and property of Coagulating all sharp and corrosive Saline Spirits. If this instance have not sufficiently instructed thee, thou mayst make another proof thus: Take the fore-mentioned Lead, acuated with Saline Spirits, and melt it in a tripple Crucible with a fire of Fusion, let it be red-hot in Flux, and thou wilt find that in a moment it will run through thy three Crucibles, which common Lead would never do, from whence it is clear as the Sun that the piercing, fretting quality which is in Lead, proceeds from the Saline Spirits coagulated in or with it. Consider well of how great

use such a Lead, whose natural devouring Faculty or Sythe is so highly acuated by Art, might be in the work of Transmutation, if we knew to make good use of it. The Philosophers writing of *Saturn*'s sharp Sythe, express themselves in these words, *Falx ejus mordax est*, *His Sythe is sharp or biting*: which how it may be made much sharper by Saline Spirits, has now been said. A further enlargement might here be made concerning *Saturn*'s Sythe; but it shall suffice at present to have demonstrated, that his easie fluxibility, and fretting devouring nature, proceeds onely from a sharp Nitrous Spirit; which when Sulphur has consumed and burnt away, much Gold and Silver may be separated from him.

Of the Nature and Property of Jupiter*, what he wants, and what he hath too much of, and how his noxious superfluities may be removed, so as on the Cupel he may yield his hidden Gold and Silver.*

Tin by the Heathen Philosophers has been appropriated to the Heathen God (or rather Planet) *Jupiter*, who has the next place in the Firmament to *Saturn*; is by the Miners called White Lead, and like it melts with a small heat, and easily unites with his Brother *Saturn*, continuing together in a moderate heat; but they no sooner become redhot, but their Brotherly love is changed to enmity, not being able to endure one another in a strong fire, but each striving to get loose from the other, which yet cannot be without the loss of one or both of their lives; so that this their combat may well be compared to the fighting of the Peasants in *Lapland*, whose custome is when two of them are highly incensed against each other, to suffer themselves to be tied fast together, so as they cannot fly back or run away, and then fall to

cutting and slashing one another so long with their knives, till the Death of one or both of them follows.

But to return from whence we have digressed. That *Saturn* and *Jupiter* are Brothers, the Heathen History informs us, relating that the four Brothers, *Saturn*, *Jupiter*, *Neptune* and *Pluto*, their chief Gods, fell into discord amongst themselves which of them should be the greatest; which contest of theirs was at last by the mediation of the other Gods composed, they agreeing to divide the Empire of the World between them. And though *Saturn* were older than his Brother *Jupiter*, yet was he fain to content himself with the command of the Earth, whilst *Jupiter* took upon him that of Heaven, *Neptune* that of the Sea, and *Pluto* the Dominion of Hell. Which Division will not at all seem strange to those that understand Nature, who find that each Brothers lot was very correspondent and comporting with their nature. The Nature of *Saturn* much resembles the Earth, and he makes all things that he takes to him like the Earth; as appears from the fore-mentioned contest with his Brother *Jupiter*. But *Jupiter*, because inwardly he is very sulphureous and fiery, therefore is the Government of the fiery Heaven properly deputed to him, leaving *Saturn* to dig and moil in the Earth: Wherefore also the Ancients have represented him with a Spade in his hand, thereby intimating his Property of digging through or piercing all things: whereas they figured *Jupiter* with Thunder bolts, and fiery Lightning-flashes in his hand, whence came that Proverb, *Procul à Jove, procul à Fulmine*; *Far from* Jupiter*, far from his Thunder-bolts*.

Now that Tin contains much Sulphur, may be thus experimented: Take the filings of Tin and powder'd Nitre, mix and put them into a Crucible over the fire,

and they will kindle and consume one another, so as nothing will be left in the Crucible. Or it may be tried thus: Melt some Tin in a Cruce, and when 'tis red-hot, cast in some Nitre upon it, which kindles the Tin, the flame carrying part of it away, and the rest is burnt to dross or fæces. But not to insist on this, it being very notorious that the greatest part of Tin is nothing else but combustible Sulphur, the remaining part being a solar pure Mercury: so that when this Sulphur is by art wholly separated from its pure Mercury, the same is easily ripened to Gold, by being joined with cold *Saturn*, which the following Praxis will abundantly make out.

'Tis worth our noting here, that this Sulphur of Tin doth not burn away, when the Tin without any addition is put to the fire, but doth then in the heat seize and lay hold of its own Mercury, burning and reducing the same to Ashes, which are very hardly to be reduced to a Metal without some addition: neither will Lead join with these Ashes, but thrusts them out from him, turning them to a white Glass; which is the reason why so few are found, who with profit can separate the Gold and Silver which is in it. *Paracelsus* in his *Cœlum Philosophorum* saith expresly that much Gold and Silver lies hid in Tin. We read also of others that have had the Art of it, and have thence extracted great treasures of Gold and Silver; amongst others *Bruschius* in his Description of *Fichtelberg*, gives us the History of a Citizen of *Eger*, on the Borders of *Bohemia*, some few miles distant from the City *Nurnberg*, who had the skill of separating the *Sol* and *Lune* which is in Tin to great advantage, having been enabled thereby not onely to build an Hospital and Church in the said place, but also richly to endow the same for the maintenance of twelve old Men and three Priests in the said Hospital.

This Person, whose name was *Sigismund Wan*, suffer'd this Art to die with him, but withall left a Prophesie behind him that the said Art 200 years after should rise again, and be made known to the World. Which Prophesie though *Bruschius* in his foresaid description make no mention of, yet is undoubtedly true: and there is a Book in Manuscript, which is very common amongst the Miners and other Artificers belonging to the said *Fichtelberg*, which I have seen, and read in it the said Prophesie, though at that time being young and unexperienc'd in the nature of Tin, I little minded it. But since God has been pleased in this my far advanced old Age, without any thing of my seeking, out of his meer grace and mercy to reveal the said Art unto me, it hath given me occasion to call to mind what formerly I had read, and put me upon reading the said Book over again, where I found that his Prophesie was exactly fulfilled, for this *Sigismund Wan* died in the year 1467, from whence to this present year 1667, are just 200 years. This Prophesie being thus precisely accomplished, I thought fit to set down some part, of the said *Bruschius* his Relation, from whence it appears that God doth often impart such skill and knowledge to good and honest People, whereby they are enabled not onely to supply themselves, but also to make liberal Provision for the Poor. The words of *Bruschius* are these, *Wohnsiedel* has no extraordinary Buildings, besides a stately and richly endowed Hospital, which was built in the year 1467, by a Citizen of the place named *Sigismund Wan*, though at the time of his building the said Hospital, he was a Citizen of *Eger*. He had to Wife a *Venetian* Woman called *Barbara*, who had great skill in Alchymy, and in particular the Art of separating Gold and Silver from Tin, by which means he

became very rich, and having no Children, built the said Hospital, constituting the Magistrates of *Eger* Guardians of the same, left them a great Summ of Money, with the Interest of which they maintain twelve old Men, and three Priests. Near the said Hospital, is a very fair Church built by the said *Sigismund*, where to this day a Picture is to be seen, containing the Pourctratures of the Founder and Foundress of the Church and Hospital, with the time and hour of their Deaths. This *Sigismund* lived at *Eger* the latter part of his life; and wrought his gainfull Work in the same House, wherein at present dwells *Andrew Griffen*.

Thus far *Bruschius*, from whose Relation it appears that there have been those who from the meaner Metals, and particularly Tin, have been able to separate Gold and Silver with great gain, so as to procure great riches thereby. We find also that in those times charity was more exercised than at present, when men instead of building Hospitals, are rather ready to convert them, with their Revenues to their own use. For which wickedness of this Age, God seems to withdraw his blessing from the Earth, so that Mines do not so much abound, nor are so rich by far as formerly. How many places in *Germany* have we known blest with Gold and Silver Mines, as also with Lead and Tin Mines, containing much Gold and Silver, of which nothing is to be found now? And this same Tin Mine from whence *Sigismund Evan* extracted so much Gold and Silver, has now for near 200 years yielded no Oar at all. About the same time also there was a very rich Gold Mine, in an adjacent little City called Gold *Granach*; which is in like manner wholly exhausted and lost. In the same Gold Mine, Antimony, also which is the Root of Gold, was found in that quantity, as from thence it was

transported to all parts of *Europe*, but now very little of it is to be found there, and that which is found, contains no Gold at all, whereas that which was digged there before did abound with it. In like manner the *Hungarian* and *Transylvanian* Mines of Antimony so rich in Gold, which flourished about 200 years since, are now quite spent so as no more Antimony is to be found there. Since which time the rich Silver Mines in *Jochems* that have been discoverd, which yielded an incredible quantity of Silver, but did not continue long so, God, for the ingratitude and wickedness of men suffering it to sink away; of which many more instances might be given but these shall suffice.

But to return to our interrupted discourse. 'Tis well known that all unripe Metals, when by the violence of Fire they are melted and separated from their Oar, do send forth a poisonous Arsenical Exhalation; yea even after they are wholly separated from their Oar, they cease not to exhale poisonous fumes, though not comparable with those they send forth when they are first melted from their Oar: as appears particularly in Tin, for if Wine be over night put into a new Tin Pot, it will give a Vomit the next morning. Copper also does the like; but Lead not so much, or rather nothing at all: whereas Iron gently purges downward, is wholsome and opens obstructions; for Iron is onely endowed with a fix Sulphur, and contains no Arsenick, as Tin doth. Gold and Silver contain neither Sulphur nor Arsenick, and therefore the Wine that is put into them is not at all changed.

Seeing then that Tin has some Arsenick joyn'd with it, which causeth the foresaid alteration in the Wine, whereas in Gold and Silver it is not changed at all, because they are free from all fœtid cumbustible

Sulphur and Arsenick; if we desire to rid Tin of its poisonous quality, and make it like Gold and Silver by removing its superfluities, we must do it by Art. We see that *Mercury* of it self is no Poyson, but becomes so when sublimb'd with Salts or otherwise joyn'd with them, by which means it becomes poisonous and volatile. This is notorious, and all Chymists believe and acknowledge it, and we have as much reason to believe, that the same is the case of Arsenick and Cobalt, *viz.* that Arsenick would be no Poyson of it self, but by reason of some saline Spirit joyn'd with it in the Earth. We find also that Arsenick when it comes first out of the Earth of a grayish colour is nothing near so poisonous, as it becomes afterwards by being sublimed with Salts, for to make it white and transparent. For though Salts in themselves be not poisonous, yet when Minerals are in certain ways prepared with them they turn them to Poisons, for every volatile Mineral that is joyn'd with saline Spirits is poisonous, but when the same Minerals are fixed, they lose their poisonous quality and become good Medicines, as may be seen in Arsenick, Cobalt, Orpiment and other poisonous volatile Minerals, which being fixed, by running them down with Salt-peter, may safely be exhibited against several Diseases. Which being so it will be easie to infer, that if we can fix the volatile Sulphur and Arsenick which is in Tin, we shall not onely take away its Poyson and make it medicinal, but also make it like Gold and Silver.

Let this then be laid as a sure foundation, that corrosive saline Spirits are the causes of all Poyson, making fix matters to become volatile and poisonous, and consequently that volatile immature metals, as Lead and Tin, when their corrosive Spirits are mortified or driven away, become fixed. It is well

known that the combustible noxious Sulphur of Metals, is the sole cause of their imperfection, and that this combustible Sulphur has no greater enemy than Salt-peter, by which it is kill'd and destroyed, and yet no better Friend neither, which though at first sight it may seem contradictorioy, yet is very true; for when the Niter does consume the cumbustible Sulphur, it is indeed its enemy, but when by this Consumption of the naughty Sulphur, the incombustible solar Sulphur of Tin becomes purged from its heterogeneous mixtures, we shall find that indeed Niter is the friend of Tin, as setting the solar Sulphur of Tin free from the captivity of its noxious Sulphur, so as now it can unite with Gold and Silver, and become such it self, which before was impossible. Thus we see that the consuming and mortifying of the superfluous Sulphur, is the life and deliverance of the incombustible Sulphur, and the corruption of the one, the regeneration of the other. To which purpose *Paracelsus* speaks excellently, saying that *Corruption makes things perfectly good, for by means of it the evil that hides and absconds the good, being taken away, the good manifests it self*; Which is very true of Tin whose solar Sulphur being hid and held by its noxious Sulphur, the same must be taken away, before Gold and Silver can be extracted from it. Which separation of the combustible from the incombustible Sulphur, must not be done with common Niter, which is too vehement for the nature of Tin, and would destroy the good with the bad, but a more mild and proper Salt-peter must be taken, *viz.* that which is hid in Lead, which is powerfull enough to kindle and consume the superfluous Sulphur of Tin, and set its solar Sulphur free, as will appear from the following Process.

When therefore thou art minded to set upon this

gainfull particular, and together universal Work, I would not have thee to be too covetous nor to begin with too great a quantity of Tin in hopes thereby to become rich of a sudden; but advise thee to begin with onely two or three pound of Tin, and try whether the Art be true or no, and if true what gain may thence be expected. And if thou find'st it to answer thy expectations, thou mayst then work in as great quantities as thou pleasest, but if thou find'st that thou canst not bring it to the desired end, thou must be content to go to School a little longer, and learn to be more a master of Fire; or else leave it off altogether concluding thou art not predestinated to this Work. It is not enough to think thou canst do it, thou must have the Art of it, else thy thinking will little avail thee. What I write here, is no other than the truth, of which the Reader may assure himself.

A Process for to separate Gold and Silver with great profit from Tin.

Set on a Cupel under a Muffel one, two, three pound more or less of Lead, let it be red hot, then cast into it half an ounce, one ounce or an ounce and half of Tin, and you'l see the Tin mount above the Lead, and the Sulphur of the *Jupiter* will kindle the Salt-peter of the Lead, and turn to yellow Ashes, which still must be taken away with an Iron Instrument for that purpose, as long as any of the said Ashes, mount or appear on the surface of the Lead. When no more Ashes appear, then cast in a fresh quantity of Tin as before, turning the same to Ashes till no more rise. Continue so long with the incineration of fresh Tin, untill all the Lead and Tin be turned to Ashes. Then mix these Ashes with half as much of our secret *Sal-Armoniack*, and by Retort distill the *Sal-Armoniack* from it, which may serve again for the same Work. In

this Distillation the *Sal-Armoniack*, draws to it the Sulphur of the Tin, and turns it to Fæces, and the pure part of the Lead and Tin are left in a *Regulus* at the bottom, which after Distillation may be beat from the *Scoriæ*: and because the *Regulus* of Lead in this operation proves somewhat flat and platy, we may lay it cross on an Anvil, and strike it crooked with an Hammer, and so the *Scoria* will fall from it, which are carefully to be kept, as being of good use, which will appear hereafter. If we desire to make a better separation of the *Scoriæ* from the said *Regulus* of Lead, we may put the said *Regulus* with its Fæces into a Crucible, and having given it a Fire of Fusion, pour out the *Regulus* into a Cone, and the *Scoriæ* will abide in the Cruce, as being of more difficult fusion than the *Regulus*. This *Regulus* of Lead, must again be set upon the Cupel, and when red hot, we must put Tin to it as before, incinerate the same and gather the Ashes, then mix them with *Sal-Armoniack*, distill and separate the *Scoriæ* from the *Regulus* as before. This labour must be so oft repeated till all the Lead and Tin be turn'd to Ashes, which will be in three or four times, after which onely a small *Regulus* will be left, which we must refine on the Cupel like other Lead, and thus the Gold and Silver which was in the Tin, will be left on the Cupel, which must be granulated, and the Gold and Silver separated from each other with *Aqua Fortis*.

The *Scoriæ* proceeding from this Work must not be despised, being more worth than the Gold and Silver which are left on the Cupel. This work being well performed, every pound of Tin will yield some Crowns in Gold and Silver, which richly pays both cost and pains. And he that has the skill to prepare the said *Sal-Armoniack* by a compendious way, may expect the greater profit from this Work. The *Sal-*

Armoniack which comes over by Distillation, will serve for the same purpose again, nothing of it being diminished, but what abides with the Scoriæ, which by making a Lye of the *Scoriæ* may also be saved, by which means a wonderfull Salt is obtained, which abounds with many and great virtues; concerning which we intend (God willing) to treat at large in our third Appendix. I had intended indeed to speak of it here, but I find this Appendix is grown too big under my hands; and therefore shall refer the superlative great virtues of the said wonderfull Salt to my Third Book. Yet to the end, that the Lover of Art in the mean time, till my Third Appendix be published, may not altogether be ignorant of what great things may be performed by it, I have thought good to inform him, that I have often in my other Writings made mention of this Secret *Sal-Armoniack*, yet concealing its preparation, *viz.* in my Book of *Dialogues*, speaking of the Preparation of the Lion's Blood. In my Treatise of *Elias Artista* I have called this Salt, Salt of Art, as also the Bishop and High Priest of Metals, and there at large informed the Curious, how by means thereof they may inseparably conjoin Gold and Silver. In other of my Writings I have given it other names. This wonderfull Salt of which I have treated in my Book of the Three Principles, shewing it to be that wherewith *Jupiter* changed him self into a golden shower, and got entrance through the Tiles into the strong Tower where *Danae* was shut up, thus beguiling her, and begetting on her *Perseus* the Destroyer of the Sea-Monster, and Deliverer of the Beautifull *Andromeda*, whom he took to Wife; and afterward vanquished the *Gorgones*, keepers of the Golden Apple bearing Orchard, *&c.*

This our Salt of Art is the Secret Chalybs of

Sendviogius, wherewith he extracts the Tincture of Gold, and of it prepares the tinging Stone of the Philosophers. This our Salt of Art is also that *Juno*, to whom (as *Virgil* relates) the Golden Bough broke off by *Proserpina* from the Dark tree is consecrated: of which I have elsewhere treated more at large. This Salt also is our *Proserpina* the Goddess of Hell and Wife of *Pluto*, and is much more ready and handy in breaking off the said Golden Bough, than that *Proserpina* which by Distillation (with great toil and labour) breaks off her Golden Branches: for this our *Proserpina* performs it without fire, or any trouble to speak of, and offers it up to the Goddess *Juno*. Which ingenious and profitable Work I intend (God willing) to set down in my Third Appendix; wherein I shall communicate to the World a perpetual Minera of Gold and Silver, which every one without any great pains may in stillness work in his own house: For there is no easier way to extract the hidden Gold from all Metals in quantity and without fire, than by means of this our Goddess *Juno*, or Jovial *Proserpina*.

Let the Reader who desires to know further of these Poetical Fables, read the ingenious *Ovid*, and others who make it their business to treat of them: and in reading he will observe, that *Jupiter* is by them represented to be the God of Fire and Lightning, and *Juno* his Wife and Sister the Goddess of the Air; whence we may gather, that by the word *Juno* is to be understood a spiritual volatile moisture and watry *Jupiter*. Now the Artist who has *Juno* for his Friend and Advocate, may easily obtain from *Phœbus* great Treasures, as well for the health of the Body, as of outward Riches; and this is so easie to be done, and with so little charges, that I dare not be so bold to write more of it, lest the wicked and unworthy should smell out the rest.

Now forasmuch as this Appendix is swoln to a bigger bulk than I had intended, I shall refer the melioration of Iron and Copper, by means of our Secret *Sal-Armoniack* to our Third Appendix. And shall onely say thus much at present, that these two despised Metals, do afford more profit, and with less charge and trouble than Lead and Tin; which Process I intend to communicate in my next Appendix.

If any find the trouble and charges of Preparing our *Sal-Armoniack* too great, he may attempt the Work with common *Sal-Armoniack* sublimed; and if that do not fully answer his desire, he may afterward prepare ours, or get it of those that make it in quantity. If it please God that I live over next Summer, I intend my self to work this profitable Process of extracting *Sol* from Tin; as also to extract the Tinctures of Copper and Iron with our *Alcahest*, in great quantity, and to give the over-plus of Profit to the Poor for a Memorial to the World. In the mean time I have here at large declared how the superfluities of Lead and Tin are to be removed, in order to the separating of the Gold and Silver contained in them; and this without concealing any of the Manual Operations thereto belonging: though I question not but many who may attempt the same, will by mistaking some Point or other fail of their end. Above all, great care must be had that the Tin be not mixed with Copper or *Regulus* of Antimony, which will make the Ashes hard and irreducible; the *Sal-Armoniack* also must be well prepared, sharp and penetrative, that it may work upon the Tin-ashes, and make them fluxible and reducible to Metal. Neither must the Tin-ashes be suffer'd to lye too long on the Lead, but continually be taken away, for otherwise they will become hard and influxible. In a word, 'tis practise onely and experience can make a

man Master of this Work, it being impossible to set down all particulars so clear and distinct, as that the unexperienced may not easily mistake. In case therefore this my Appendix should seem too dark to any one, let him have patience till my Third Appendix be published, in which I intend to communicate a much more easie Process for extracting Gold and Silver out of Lead, Tin, Iron and Copper.

There is also a way of turning fine Tin alone by it self into Ashes, by stirring it continually in an Iron Pot over the fire, which Ashes must be reduced with our *Sal-Armoniack*, and then turn'd to Ashes again and reduced, which must be repeated till the greater part of the Tin be turned to *Scoriæ*, and the Gold and Silver melt down to a *Regulus*, which being tested, leaves behind the Gold and Silver which was in the Tin, and the remaining *Scoriæ*, or Dross, are of greater value than the Gold and Silver it self. For he who knows to make use of these Fæces as a Magnet to attract the Gold from metalline Solutions, will get great profit thereby; the said Fæces being a main cause of my publishing this Treatise, because of their great and profitable use both in Physick and Alchymy; forasmuch as with their help not onely Gold and Silver, but also true Universal Tinctures may be extracted from Stones and Metals: So that he who knows the use of these Jovial Fæces may not onely richly maintain themselves, but also liberally communicate to the Poor. If God continue my life, I intend to undertake this profitable Work my self, and thence make some provision for the Poor; for I have already taken my leave of this wicked World, expecting with patience an heavenly Guide to conduct me to life eternal, which I earnestly pant after.

A Corollary*, or Supplement to the foregoing* Appendix.

We have seen in the foregoing Treatise, how with the help of Lead, the Gold and Silver which is hid in Tin may be extracted with our Secret *Sal-Armoniack*; which after it has separated the said Gold and Silver, doth still retain great virtues, as being become a true natural Magnet, able without much trouble or fire, to extract not onely from Gold, but also from the gross bodies of Iron and Copper their purest Tinctures, which in them are better, and in greater quantity than in Gold it self. Which Solar Magnet few Philosophers have known, or the use of it. Our *Cosmopolita* writes most clearly of the same in the following words: *There is a Steel which can extract from the Rays of the Sun, that which many have sought and not found*. And again, *If our Steel copulate eleven times with Gold, the Gold thereby becomes weakned almost to death, and the Steel will conceive and bring forth a Son more famous than his Father*. *Nuysement* also speaks of this Magnet, but sparingly and darkly, and *Paracelsus* yet more obscurely. Others who had the knowledge of it, make no mention thereof at all; fearing, 'tis like, lest the Art might grow too common, and be prostituted thereby: but without cause; for though a Man be able to extract the Tinctures of Metals, yet hath he not therefore the whole Art: for though the said Tinctures be of great use for the cure of all diseases, yet can they not display their virtues upon Metals, till they be fixed with Gold, and have obtained metallick ingress: but in Physick, as was now said, they are very usefull, before their fixation, and especially those which by our Magnet are extracted from *Mars* and *Venus*, for

they purge all that is hurtfull out of the Body, not weakning as common Purges do, but strengthening it. They also purge by Sweat and Urine, and still all inward and outward Pains procure sweet rest, by reason of the Anodynous quality hid in *Mars* and *Venus*. So that these Tinctures of *Mars* and *Venus* before fixation may be used against all diseases with assurance of good success; and when fixed, they turn Silver into Gold. For our Magnet robs the Dragon (*viz. Aqua Fortis*, wherein *Mars* and *Venus* are dissolved) of the Golden Fleece he is keeper of, and, like another *Jason*, brings home the same, and with it restores his aged Father to youth again, and procures to himself vast and unmeasurable Riches. For these Tinctures do great wonders in both faculties. It is not long ago since I took some grains (which I had left of a former preparation) of one of these Tinctures, to see if thereby I might be somewhat refreshed, which indeed did perform all that could be expected from it, but having no more of it could not perfect my cure. Since which time I have had a great longing with the first occasion to prepare some more of it, because I found that upon taking that small quantity, my bald head began to be cover'd with black curl'd hairs, from whence I am verily perswaded, that had I had more of the like Tincture, it would have wholly renewed me; and therefore shall not be wanting to make use of the first opportunity to prepare more of it, both for my own health and that of others, and publish the wonderfull works of God throughout the whole World. And forasmuch as God of his free Grace has been pleas'd to bless me with the knowledge of this best and most powerfull of Medicines, though by reason of my weakness I am forc'd to keep my bed, and must patiently wait, till it shall please God to put me into a condition of

preparing the same; yea though Death should prevent me from ever doing it, yet shall this be my satisfaction, that I have here informed the Lovers of Art, what wonder-working Tinctures lye hid in these despised Metals of Copper and Iron, and which may so easily with our Jovial Magnet be extracted.

But let him that undertakes to work with our secret Magnet, take heed that he do not make it too strong, lest instead of a Tincture, he draw the gross Bodies; for it often happens when the Magnet is too strong, that, together with the Tincture, it draws the gross Body, and especially of the Homogeneal Metals, in which the Tincture is so closely united with the Body, that it is very hard to separate them. A common Magnet draws Iron, together with its Tincture, but without separating the one from the other; but our secret Magnet draws from Iron (its Body being first opened) the Tincture onely, leaving the gross Body behind, because Iron and Copper are Heterogeneous Metals, in which the Tincture is easily separable from its Body, whereas Gold, which is Homogeneal, doth not readily part with his Tincture, the Body following its Soul or Tincture. Yea a common Magnet draws the whole Body of Iron, without separating the Tincture, even then when by Nature it is made Homogeneal and fixed like Gold: as we see in Granat-stones, which are rich in Iron (as those are which are brought to us from *America*, and especially from *New-France*, some in great pieces and others small like Sand) that they are greedily attracted by the common Magnet: and yet no Iron can be melted from them, forasmuch as neither Fire will flux, nor corrosive Spirits dissolve them; but their Tincture may easily be drawn from them according to the way I have set down in my Book *of the Three Principles*. In *America* are found great

Mountains of such small Granats, which being Homogeneal, will not yield to Fire or Stygian-waters. And now lately I have seen some Mineral Earths and Stones brought from *New-found-land*, of which there are whole Mountains there, which never any Man that I know could make any profit of, though it be certain that every pound weight of them contains half a Crowns worth of Gold and Silver. But we need not trouble our selves to seek for Treasures in other Countries. God having furnished all parts of the World (none excepted) with Subjects that afford good and abundant Tincture, onely the Art of drawing them forth is wanting. We do not stand in need of Gold for to extract its Tincture, because we may have one as good from *Mars* or *Venus*, and with much more ease.

But if any Man has a mind to draw the Gold from such Waters, wherein it is imperceptibly scatter'd and dispers'd, let him put a small quantity of our secret Magnet into the said Water, and he will see all the said Gold presently gathered to it, and reduc'd to Visibility and Corporality, with great profit to the Artist. And because many such Waters abounding with Gold and Tincture, are found prepared by Nature to our hands, without charges or trouble, this short information here may to the skilfull open a door to great Treasures.

But to proceed and shew that there are such Magnets wherewith Tinctures may be extracted; and here first of all I will instance in my Jovial *Sal-Armoniack* here described, whereby the Tin turn'd to Ashes is reduced; for when the same *Sal-Armoniack*, impregnated with Tin, is dissolved in Spirit of Salt, it becomes such a Solar Magnet, which can and does

extract the Tinctures from the Solution of Metals. For when a little of this *Sal-Armoniack* Water is poured upon the Solution of any Metal, shaken together, and set aside, the Magnet, as in a moment, attracts all that's good in the said Solution, whether it be Gold or Tincture, to the bottom of the Glass of a purple or blood-red Colour, and the Solution becomes white. And yet there are many Magnets which are better than this of *Sal-Armoniack* impregnated with Tin, extracting the Tinctures from Metals with more ease, and better than that. The reason why I onely make mention of this, is, because it is the product of the Work here described, *viz.* the extracting Gold and Silver from Tin. And to the end I may evidence to all, that the said Magnet is of greater value than the Gold and Silver, which is got from the Tin; I shall say thus much, that it is impossible for the ignorant to believe of what great advantage this Magnet is to those that understand the use of it: for not onely may Universal Tinctures be extracted therewith for curing the Bodies of Men and Metals, out of Metals and Stones, and that easily and without charge; but it can also extract much Gold from those Metals and Stones, in which much volatile and spiritual Gold is hid, *viz.* Iron, Copper, *East-Indian* Zink, *&c.* and amongst Stones the red and yellow Pebbles, which are almost every-where to be found. Concerning which extraction of *Sol* from Sand and Stones, I have treated at large in my Seventh Part of the *Prosperity of Germany*. Now that our Magnet draws to it all Colours and Tinctures, not onely from Stones and Metals, but from Vegetables and Animals, and doth highly exalt the same, may thus be proved: Dissolve one ounce of Gold in *Aqua Regis*, pour the yellow Solution into a pound of common Water, and this yellow Colour will no more be perceived, then pour

also some of our Magnet into the said Water, and all the Water will become blood-red, and being set aside, the Gold, which the Magnet hath attracted, falls to the bottom, highly exalted in Colour, and the Water remains white, having lost all its Gold, and may be used again for the like extraction of Gold or Tincture out of Stones and Metals *in infinitum*, without any impairing of its strength; so that I may well say, that never hath a more profitable invention been communicated to mankind.

Dost thou desire to experience what our Magnet can doe in extracting the Colours of Vegetables and Animals? then proceed thus: Boil Brasile wood, Turmerick, or any like Vegetables in Water till it be coloured, filter it, and pour a little of our Magnet into the colour'd Water; shake it together, and the Magnet will draw all the colour from the Water to it self, which falls to the bottom in form of a very subtil Powder; the Water being decanted, and the Powder dried, affords an excellent colour for Painters; Brasile wood a brown red, Farnabock a light red, Dragons-blood a bright ruby colour, Turmerick a yellow, and Indigo a curious Sky-blew. Animals, as Cochenille, &*c.* may be proceeded with in like manner, and will afford far better Colours than they can of themselves, because our Magnet (as hath been said) exalts all Colours whatsoever. To try this thy self, thou may'st according to my foregoing instruction prepare it, and so find by experience the wonders it will perform in extracting the Tinctures of Metals, Stones, Vegetables and Animals; which if thou dost, thou wilt find more than I have here set down. And if thou hast no time to prepare the Magnet thy self, thou mayst have it of those who prepare it in great quantities: For because this wonder-working Magnet can do such great things, I have communicated the preparation of it to

a very honest friend, to the end he might make it in quantity, and vend it for the good of the World, at a Rix-dollar *per* Pound. With this Magnet Wool, Linnen, Silk, Bones, Feathers, *&c.* may be dyed or painted far more fair and lasting than any other way now known: Chymical Physicians, with the help of it, may prepare the true Quintessence of Metals and Stones for the cure of all diseases: and it will assist the Philosophers to extract Universal Tinctures from all coloured Stones and Metals, with which they may throughly and lastingly tinge white metals to Gold, and Crystal to Rubies, Saphires, Jacinths, Emeralds, *&c.* according to their pleasure.

In a word, he who has this Magnet and knows the use of it, needs not to read any Chymical Books for all in all is comprehended in it, as in a short time will be manifested. This Magnet is so great a Treasure that the vastest Volumes cannot contain all its virtues, it is serviceable to all men; yea no subject can be found in nature, that can produce such wonderfull and usefull effects as this our secret *Sal-Armoniack*. Great Books have been written concerning the common Magnet which onely draws Iron, though indeed its nature and properties be also very wonderfull; for without it there could be no sailing by Sea in the Night time, whereas now it is all one to Marriners whether they Sail by Day or by Night: but how much more highly is our magnet to be esteemed, which not onely points out to Philosophers, Physicians and Chymists, the right way through the vast and wild Sea of Chymical Operations, to their desired Port, richly laden with the best of Commodities Gold and Tinctures, but also directs Mechanicks to new ways and inventions of obtaining wealth, never before known.

Indeed as there is a great difference between *Mars* and *Jupiter*, so also between these Magnets which partake of their natures. The common martial Magnet guided *Christophorus Columbus* to *America*, that new World abounding with Gold and Silver, besides many other profitable Commodites, but all this in a way hazardous and full of danger, many thousands having lost their lives as well by Sea as by Land in endeavouring to obtain these riches. For *Mars* with his Magnet onely loads and perswades to War and Blood-shed, whereas the friendly and peace-loving *Jupiter*, with his benign Magnet stirs up none to evil but onely to good, and directs us to a Land much more abounding with Gold than *America*, whence we may fetch the same in peace and quiet without fear of War or Blood-shed, and to the glory of God make known his Works of wonder to the ignorant.

And thus much shall suffice to have spoken concerning the extracting or separating of Gold and Silver from Tin, and the easie extraction of Tinctures from Stones and Metals, by means of our secret *Sal-Armoniack*. Now for a Surplus, and to pleasure the Sons of Art, I'll take one turn more in the Philosophick Garden and gather some fair Flowers, to make a Garland in honour of the Adepts, that they may wear it in remembrance of me. The first of these Flowers is the white Lilly, the second the blew Violet, and the third the deep Purple *Amaranthus*, being the chief that grow in our Garden, of which I intend to twist my Garland.

The first, *viz.* the white Lilly appears in the beginning of our Work; the blew Violet in the midst, and the deep red *Amaranthus* in the end of it. That I compare the beginning of our Work to a Lilly, is not

without reason, forasmuch as our mercurial Water is whiter than white, being called of Philosophers a white, whiter than white, because though it be a white colour, yet it excells all other whites, with its glistring brightness so far, that other white colours compared with it look very dim and dark. And because God hath bestowed upon the Lilly such afair glistring white, as no Flower can compare with it, therefore we compare our mercurial Water (the beginning of our Work) for its unparallel'd whiteness to the Lilly of the Field: of which our Saviour himself saith, *That* Salomon *in all his glory, was not arrayed like one of them*. For this cause also the Philosophers always termed the beginning of their Work a white Flower, as appears (among other instances) from an inscription engraven on two Candlesticks, belonging to a Cloister in *Westphalia*, made by a *Monk* and dedicated to the use of the Altar there in these words, *Non ex Auro, nec Argento sed ex primo Artis flore sum factum. I am not made of Gold nor Silver, but of the first Flower of Art.* These Candlesticks are white as Silver, but heavy as Gold; which may pass for a profit that the white in our work is termed a Lilly or Flower.

And that this our bright white Lilly doth far surpass all other white Flowers whatsoever, the Philosophers in *Turba* witness when they say, our Salt exalts the whiteness in Silver and the red in Gold; which indeed is the very truth, though it be not believed by the unexperienced, because at first sight it seems against nature, that one colour should die both red and white: yet that it is so, I here witness unto with my Pen, and hope shortly to make an ocular demonstration of it to all that are lovers of the wonderfull Works of God. In the mean time we may prove it thus, dissolve in *Aqua Fortis* some fine

cupell'd Silver, and in another Vessel in *Aqua Regis* some fine Gold, pour a little of our mercurial Water into each of the Solutions, and the Silver will fall to the bottom white as Snow; yea rather will be whiter than that or any other thing in the World: and the Gold will be precipitated red like blood, and the Stygian Waters are rob'd of all the Gold and Silver that was in them, by the addition of our secret *Sal-Armoniack* Water, so as not the least grain remains with them. Thus *Perseus*, *viz.* the exalted Gold, has deliver'd *Andromeda*, *viz.* the white exalted Silver, from the Sea-Monster, *viz.* the *Aqua Fortis*, and taken the same to his Wife, that is, radically united with it. And that our jovial *Sal-Armoniack* will do this, I hope e're long to demonstrate to the lovers of Art.

The Blind World may learn from hence, it was not without reason the Philosophers affirm that their secret Salt, exalts the red in Gold and the white in Silver. And that their Salt is a *Sal-Armoniack*, appears from their crying, *O our* Sal-Armoniack*! O our Sea!* for had it been the common, how could they have call'd it theirs? *Turba* saith, *If the Almighty had not created this Salt, it were impossible to compleat our* Elixir: Which words are alledged by *Arnoldus de Villa Nova*, who saith that *Almizadir* (a name the Philosophers give their secret Salt) is a *Sal-Armoniack*, as appears from his own words taken out of his Breviary of Alchymical Books, being a Letter of his to a Pope of *Rome*.

> "To the most holy Father, e're I acquaint thee that first of all the bodies must be reduced to their first matter. To understand which, thou must know, that the matter of all Metals, and their Sperm is a white fume decocted and thickned in the Bowels of the

Earth, by a sulphurous heat; and according to the varieties of this Sulphur, and its quantity in the earth, divers Metals are produced; the matter of them all being the same essentially, and differs onely accidently. Above all things it is certain, that the Workman can do nothing here without Salt, no more than an Archer can shoot without a string to his Bow. *Morienus* expresses this more clearly, when he saith, *Take the Phlegmatick and Cholerick, and grind the Sanguine with it, untill it become a tinging Heaven*, &c. The Phlegmatick is cold and moist, *viz. Mercury*, the Cholerick is hot and dry, *viz. Sal-Armoniack*, and the sanguine is hot and moist, *viz.* Gold. Observe that *Sal-Armoniack* doth not give Colour, but Ingress, and prepares the matter and purgeth it, and then the Spirit being united with the Body, it hath ingress, and having conjoin'd these, it goes off. For this Salt is an unctuous fatness coagulated by the dryness of the fire, of a hot and subtil dry nature, which penetrating through all parts, dissolves Bodies, and is the conjoiner of opposites, and of all Spirits with their Bodies. For this Salt is a volatile Spirit, a generating Stone, and a helper towards the production of the Elixir; because if this Salt were not, the Elixir could never be dissolved, nor have ingress, neither would one thing be join'd to another, or have ingress into another. It is volatile, and yet join'd with Bodies, it is a Body which is hid in it. And therefore *Avicenna* saith, *If you put* it*, viz.* this Salt*, instead of Fire, Air, or Sulphur, you will not err in your work, because it inclines it self to*

> *every nature and Almizadir*; that is, Sal-Armoniack *will alone do thy business*. And in the Book of Aloms and Salts 'tis said, that *if God had not created this Salt, the Elixir could never be perfected, and the study of Alchymy would be in vain. He* therefore *that works without Salt* (as the Allegory of the Wise Men hath it) *does not attenuate the dead Bodies in their Graves, and therefore can never expect a resurrection,* &c."

From this Letter of *Arnoldus* it appears fully, that their secret Salt is a *Sal-Armoniack*, though not the common. Concerning which Salt the Philosophers express themselves very differently. Our *Cosmopolita* cries out, *O our Sal-Armoniack! O our Sea!* and teaches also the preparation of it, though very darkly, where he speaks of the little fish *Remora*, of which we are told, that it is able to stop a great Ship under Sail in her course; and we know our secret *Sal-Armoniack* has the force to stop the Ships richly laden with Gold and Silver, sailing in the Sea of *Stygian* Waters, and to lead them whither it lists; from whence it appears that our Jovial *Sal-Armoniack* is the true *Remora* of the Philosophers.

I proceed now to the second Flower, *viz.* the blew Violet, which is likewise found in our Garden. We have heard how by means of our Jovial *Sal-Armoniack*, the colour of Gold and Silver is exalted, after it hath attracted them out of the salt Sea, wherein they were dissolved. But if the Solutions of both Gold and Silver be pour'd together in one Glass, and some of our Magnet be put to them for to attract the same, then the Gold which before was Blood-red, and the Silver which was so white, do together constitute a Violet colour, which is the second

Flower growing in our Garden.

The third and most beautifull Flower of all that grow in our Garden, is the fair Flower *Amaranthus*, which of all other doth longest keep its colour; the white Lillies shed their Leaves as soon as they are ripe, and Violets in a short time wither and lose their colour; but the *Amaranthus* keeps her colour Winter and Summer. And the same may be said of our metalline Flowers, the Silver attracted by our Magnet is the white Lilly, which when joyn'd with our blood-red Gold, produces our blew Violet, and out of this Violet, by means of the Fire, is afterwards produced the fix and permanent *Amaranthus*. When a Philosopher knows where to find, and how to pluck these three Flowers, he may well wear them as a Garland of Honour. Thus much I have added to point out these Flowers to the Sons of Art, and to stir up a desire in them to pluck them for themselves. At the present, time doth not permit to add any more, wherefore I hope the Courteous Reader will accept of what he finds here, intending in my third Appendix, God willing, to speak more fully of other like Flowers, which with the help of our secret *Sal-Armoniack*, may with more ease and in greater abundance be gathered than those now mentioned. I intend also therein to treat of a far more profitable use of our secret *Sal-Armoniack*. For although our secret *Sal-Armoniack*, which by manual labour is prepared of two Contraries, *viz.* Oil of Vitriol, Spirit of Salt or other corrosive acid Spirits, and urinous Spirits, be of great use for the meliorating of Metals, and the preparing of many good Medicines, yet is all this but Children's play, if compared with what may be done with our most secret *Sal-Armoniack*, which is not prepared by Art, but created of God, and may be had every where in abundance without money. Yea,

the Philosophers say that all men have it, that *Adam* brought it with him out of *Paradise*, and after death took it with him to his Grave; which is the constant assertion not onely of Heathen, but also of Christian Philosophers, who have asserted the same with many arguments, amongst whom are *Albertus Magnus* and his Disciple *Thomas Aquinas*, who were holy and religious men, and therefore very far from obtruding lies upon the World. There are also many Writings of unknown Philosophers, who assert, that all both rich and poor, always carry the matter of the Stone about with them, yea, that they bring it with them, from their Mothers Womb: which though it may sound strange to the ignorant, because Man doth not appear in a mineral form, but in Flesh and Blood, yet sure it is that the mineral virtue is hid in him, for if it were not so *Albertus* could never have found Gold between the Teeth of dead Mens Skulls.

And for a conclusion, I *Glauber* do here protest, that this most universal *Sal-Armoniack* is able to change common Mercury in two or three days time, that it shall be no longer Quicksilver, nor whiten *Sol Lune* or Copper, but rather exalt them in their colours, and change them into true Tinctures. This *Sal-Armoniack* also has the power to fix (though it be unfixt it self) all volatile Minerals, *viz.* common Sulphur, Mercury, Antimony, Auripigment, Zink, Bismuth, Arsenick, Cobalt, Galmey, and other such like in twenty four hours, so as afterwards they will suffer themselves to be melted, without sending forth any smoak, and may be taken inwardly for the cure of many Diseases, concerning which I intend suddenly to give a fuller and further account. And therewith conclude this small Treatise of the wonderfull Powers and Virtues of our secret Artificial, and most secret natural *Sal-Armoniack*. The

godly and upright will easily apprehend what is here written, but the ungodly never. In our third Appendix we intend to enlarge on these and the like high Secrets, and declare the further profitable use of our Mercury of Tin, as being the onely means, without troublesome or chargeable labour to obtain to an universal Medicine.

The End of the Second Appendix.

THE THIRD APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

Wherein is Treated of the Further Use of our Wonder-working *Alcahest* or most secret *Sal-Armoniack*. And more particularly, of the way to Extract the Tinctures of Gold, Iron and Copper; as well as of all precious and common Stones; and to introduce the said Tinctures again into other white Metals and Stones, so as permanently to colour and meliorate the same.

Faithfully Translated out of the High-Dutch *Original.*

Courteous READER,

In the fore-going Second Appendix *to my* Pharmacopœa Spagyrica*, I promis'd the publishing of a Third* Appendix*, wherein I intended to communicate to the*

Lovers of Art, the remaining Vertues of our Secret Sal-Armoniack*; but finding that my Candid publication of so many great and useful Secrets are so coldly and carelesly received by an ungratefull World, I have thought good to cover the same in silence. However that I may not be wanting to contribute what I can in this my Third* Appendix*, for the satisfaction of the ingenious Seekers and Lovers of Art, I design to conclude my* Spagyrical Pharmacopœa *with the Discovery of a* Wonder-working new-found-Alcahest*, which by its surpassing Virtues does far excell all those before-mentioned. Which new Discovery will without doubt be more acceptable to the Lovers of these Secrets, than to Treat further concerning the already Communicated* Sal-Armoniack*; which whosoever shall take the pains to prepare, will find much more than I have set down concerning it; and therefore think it not needfull to enlarge any further on that Subject, in the mean time neglecting things of greater and better concern. I say better things, because the discovering of this* New-found Alcahest *will afford more light by far to Seekers, than the former could: For which reason I have thought good to set all other things aside, for to Treat of the* Alcahest *which has not its like in the Universe, as I hope by God's assistance in this Discourse to make out and demonstrate.*

Now because I here write of an *Alcahest* or *Wonder-working Sal-Armoniack*, I think it not improper to explain the word *Alcahest*, and to make known the meaning and importance thereof, which may help us to discover the true Use and Vertues of the same. Some tell us that the word *Alcahest*, is a Corruption of the *German* word *Algeist*, that is to say, *All-Spirit*, from its very spiritual nature, and because it reduces gross Bodies to Spirit. Others by transposing of its

Letters, make a *Dutch* word of it, importing *hasty or swift running, flying,* &c.

Now we know that among all Salts that are in the World, there is none to be found, which in Distillation or Sublimation doth sooner volatilize the most subtil part of Minerals, Vegetables, and Animals, and carry them over the helm, than a good *Sal-Armoniack*: Wherefore the said Name may well be given to it, by reason of its volatilizing all things, and carrying them swiftly over the helm.

And forasmuch as I have already spoken concerning several of these volatilizing Salts, calling the first *Common Sal-Armoniack*, the second *secret Sal-Armoniack*, and the third *most secret Sal-Armoniack*, I find my self destitute of a Name by which I might call this my New found *Sal-Armoniack*, except I should give it the name of *Eagles Wings*, which I am the rather inclined to do, because in some of my former Writings, I have by way of Allusion expressed the said Volatilizing Salts by the Name of *Wings*, comparing the first and weakest of them to the wings of a *Dove*, the second to those of a *Raven*, and the strongest of all to *Eagles wings*. And seeing the *Sal-Armoniack* of which I am now to Treat, is far more powerful than any of them all, I may well give it that name, and the rather, because Antient as well as Modern Philosophers have given the name of *Eagles wings* to common *Sal-Armoniack*; some of them, 'tis like, not knowing of any better. Thus *Paracelsus* sets down the way of volatilizing his *unripe Mineral Electrum* by means of the Spread *Eagles wings*; and in many other places of his Writings, he calls *Sal-Armoniack* an *Eagle*, because this Salt, of all Salts, as the *Eagle* of all Birds, takes the highest flight, and therefore also is called the King of Salts.

The *Heathens* attributed a Flying *Eagle* to their cheifest God *Jupiter*; and the Holy Apostle and Evengelist St. *John*, because in his Gospel he takes a higher flight than any of the other Evangelists, is represented with an Eagle standing by him, as being his proper Embleme. We also find in the Writings of Philosophers, the word *Eagle* is made use of by them to signifie any thing which by Art is exalted to the highest degree it is capable of; and therefore this *Sal-Armoniack* which in its flight excells all those before spoke of, exalting things to the highest top of Perfection, may well be styled the *Eagles Wing*. *Pliny* makes mention of a great and monstrous Bird called a *Griffon*, found in the Eastern parts of the World, and of that strength, as to be able to carry away an Armed Man on Horseback, Horse and all, to his Nest: which strong Bird is a good Embleme of the surpassing force of this our *Eagles wing*, which like the *Griffon* is also provided with strong Talons, with which it lays hold on heavy things, and carries them away with it, as we shall hear by and by. For every good *Sal-Armoniack* hath these two Vertues, of being sharp and piercing as well as volatile: the sharpness are its Talons, whereby it seizeth and lays hold of things; and its volatility, are the Wings with which it carries them away. Now the stronger these talons, and the larger these wings of *Sal-Armoniack* are, the more will thereby be effected: The Common *Sal-Armoniack* is the weakest of all, our Secret *Sal-Armoniack* is as strong again, and our most Secret *Sal-Armoniack* far excells them both; but this we treat of here, is by much the strongest and most active of them all, and therefore may well be compared to the King of Birds.

This same *Sal-Armoniack* may also with great reason be called *Lucifer*, as afording a bright-shining

Light to Chymists, whereby they may discover great Secrets: For as the bright Morning Star in the Firmament, does go before the *Sun*, and gives notice of his rising, and therefore is called *Lucifer*, that is the Harbinger or Bringer of Light. And as the said Star doth not only Usher in the Day, but also shut the same, and bring on the Night, being therefore also called *Vesperus*; we shall find a fit resemblance of all this in our Philosophick *Lucifer*, forasmuch as the same makes known and discovers to us, the rising as well as setting of our Spiritual *Sun*, and is a double Key which shuts as well as opens.

But to shew more particularly that my New found *Alcahest* or Spiritual *Sal-Armoniack*, hath this resemblance with the Morning-Star, *Lucifer*; I say, that, as the said Star ushers in the *Suns* rising; so likewise our Sophick *Lucifer* goes before our Spiritual *Sun*, and ushers the same over the Helm. And as the Firmamental Sun, when it riseth above the Horizon, doth by its Light, and Vital heat quicken, vigorate and refresh every thing; in like manner our Philosophical Sun, or Spiritual Gold, when by means of our *Lucifer*, it is brought from under its earth or dark *Chaos*, quickens and rejoices whatsoever is contain'd within the compass of our Sophick Heaven.

And as in the Heavens the *Sun's* rising follows soon after the appearing of the Morning-Star, following the same, as it were, at the heels; so likewise our *Lucifer*, when by the Artists, She is joyned with the dark *Chaos*, in which the Sophick Gold lies hid, and begins to feel the Fire, swiftly comes over (for such is the nature of an *Alcahest*) and brings tidings of the Philosophick Suns rising, which indeed follows it at the heels. Again, As the *Sun* of the Firmament, leisurely follows the Morning Star, not leaping forth

all at once; so our Sophick *Lucifer* brings over Gold, not all at once, but gently and by degrees, at first appearing very little, and afterwards discovering it self more and more, till at last it shine forth in its full Meridian Glory.

Neither ought it to be thought strange, that I compare our *Alcahest* to *Lucifer*, our Gold to the Sun, and our *Alembeck* or Vessel to *Heaven*; seeing that others have done the same before me, and particularly *Hermes Trismegistus* the Father of all Philosophers, has made use of this Allegorical way of expressing himself in the description of his *Universal Tincture*, as may be seen in his *Smaragdine* Table at the latter end of *Mirac. Mundi*.

Thus the *Reader* may see how the Philosophers of old took pleasure to represent their high Secrets in Parabolical expressions; which may further be traced in *Morienus* his Description of the *Universal Tincture*, in *Paracelsus* his Book entitled *Cœlum Philosophorum*, which contains great Secrets concerning the Transmutation of Metals, but much in Symbolical, and Allegorical expressions.

But to return to our *Alcahest*, whose name imports a strong Spirit which lays hold of Heavy and fix things carrying them upwards with it self, that is Volatilizing them. The *Eagle*, as a King of Birds, seizeth Hens, Gees, Hares, *&c.* with his Talons, and carries them up to his Nest; but as for what *Pliny* writes of the *Griffon*, seems rather an Allegory than a true History, because *Pliny* among other things relates of this Bird, that with her strong Talons she digs up Gold from out of the high Mountains and Rocks, and makes her Nest with it: Now how improper this is for a Bird to make her Nest with Gold, and not rather with Feathers and other soft

materials, is apparent enough at first sight. Wherefore we may safely conclude, that the Ancients by this great and strong Bird, have denoted to us a violent and high volatil *Alcahest*, such as ours is, which lays hold not only of the Spiritual, but also of the Corporal Gold which is in Metals, Stones and Rocks, and plucks up the same with its sharp Talons, and with its strong Wings carries up the same to the tops of Mountains, there to make her Nest. Thus we see how this Story may be verified: For indeed the Talons of our *Alcahest* are much sharper, and her Wings much stronger, than those of the *Eagle* or *Griffon*; for when we pour the same upon any colour'd Metals or Stones in a Glass placed in a heat of Sand, it presently lays hold of them, and digs up not only the fix Gold that is in them, but also all their fix and volatile Tincture, and carries it to the top of an high Mountain, that is the head of the *Alembeck*. Nor doth it only exert its power upon imperfect Metals, or upon Sand and Flints, which are of a Dissimilar and Heterogeneous nature, and therefore more easily separable, but shews forth also its surpassing strength, upon six Gold and hard precious Stones, which are Homogeneous and of very difficult Separation, penetrating their compact and shut-up Bodies, drawing from them their fixed Tinctures or Souls, and carrying them up to the tops of *Olympus*. Neither doth it only extract Tinctures from dissolved Metals and powdred Stones, but also from those that are whole and entire, robbing them of their Tinctures without destroying the frame and figure of their Bodies, which indeed is wonderful. And as it thus extracts these Tinctures, so it can wonderfully introduce the same again into other hard and compact Bodies: All which it performs by reason of its surpassing subtile and piercing nature;

as being neither Earth, Water, nor Air, but a meer Fire, penetrating all things, and which nothing can withstand or resist.

Take this instance of it; Fill a Glass-body with Earth, Water, or Air, and you'll find that none of them will be able to penetrate the Glass, but put Fire into it, and it will pierce the same without the least resistance. Wherefore the Philosophers speaking of our Secret Fire, say: *Our Fire is stronger than the Common, because it turns Gold that is most fix into a meer Spirit, which common Fire can no way perform*. All men know that Gold cannot be destroyed by any common Fire, whereas our secret Fire carries over Gold in form of a Spirit, as if it were a volatile Mercury: Judge then whether this be not a wonderful Fire, which as it were in a moment, makes fix Gold spiritual and potable.

We read in the Scriptures, that the *Israelites* forced *Aaron*, in *Moses*'s absence, to make them a Golden Calf for to Worship; and that when *Moses* was come down from the Mount, and saw the Children of *Israel* dancing about the Golden Calf, *his anger was kindled against them, and burning the Calf with fire, he ground it to powder and strewed it upon the water, and made the Children of Israel to drink of it*, Exod. 32. 19, 20. Now whether it was by Art, or by the immediate power of *God* that *Moses* so burnt the Golden Calf, that the *Israelites* could drink it down, we will not now dispute; thus much we know, that it could never be done with common wood or Coal fire. Besides, we know that *Moses* was not defective in any thing of Art or Knowledge, as having been educated and instructed in the Royal School of *Pharaoh*, in which true Philosophy, Astronomy, Magick, Alchimy, and Physick at that time greatly flourished. We read of

the Holy Apostle and Evangelist St. *John*, a thing no less surprizng and wonderful, *viz.* that he turn'd Rods to Gold, and common Stones into Gems, which he distributed to the Poor; as is exprest in the *Latin* Hymn the *Roman* Church sings in honour of that Evangelist, on the Festival-day appropriate to him, I am not ignorant that some are of opinion that St. *John* could never do this by art, because he did not make use of the proper matter for Transmutation, but by the immediate power of *God*, which I will not now determine; only this I can say, and if need were, make an Ocular demonstration of it, that out of Wood, and other Vegetable and Animal subjects, none excepted, good Gold, abiding all proofs may be made, though with more ease out of one Subject than another. For indeed the Principles of Metals are as well to be found in Vegetables and Animals as in Minerals, though somewhat more remote and invisible, than in these. That Wood contains a Sulphur like to that which is found in Metals, none can deny, and I have demonstrated in many places of my Books; neither is it destitute of *Mercury* and *Salt*. Wherefore I here openly profess, by an impulse from *God* and Truth, that it is no hard thing for me, out of all Vegetable and Mineral Subjects to make good Gold, by means of our fiery maturating Spirit, to which in this Treatise I have given the names of *Alcahest*, *Eagles wings*, *Griffons talons*, and *Lucifer*.

The Ancient Philosopher *Artephius*, has not specified the time, in which his Secret fire can maturate the true subject of the Stone, and bring it to perfection. *Pontanus* saith it may be done in a short time, and with small charges. 'Tis probable that *Moses* scarce spent one day in burning the Golden Calf with the Sophick fire; neither is it likely that St. *John* made any long work, of changing Wood into

Gold, and common into precious Stones. If *Miriam*, *Aaron's* Sister, could in three days time compleat the Philosophers Stone from beginning to end, (according to the Testimony of Philosophers) why may not there such enlightned Persons be found at this day among good Christians that can do the same? The same *God* who gave this knowledge to *Moses* and *Miriam*, as also to the Evangelist St. *John*, he lives still, and ceaseth not by his Holy Spirit, to enlighten his Elect, without any Verbal Disputes, reading of Books, Labour, Weariness, or Charges, in all Divine and Eternal, as well as Temporal and Natural things, and to lead and conduct them to their desired end. Wherefore all ought in the first place to beg of *God* his Light, Understanding, and Wisdom, as *Salomon* did, and not to seek after vain and perishable Riches, by which means they would obtain much more than they ever can by their own willing and running. I *John Glauber* affirm it boldly, that with our secret fire, I can in the space of three hours, make pure natural fix Gold to be as volatile as any Spirit of Wine can be; and again in twenty four hours-time, turn the said spiritualized and exalted Gold, into a fix transparent, spiritual, sweet, tinging Carbuncle: and this in the way of Nature, to the wonder and astonishment of the ignorant Covetous Children of this world, that walk in darkness; and yet (as *Christ* saith) are wiser in their Generation than the Children of Light.

Let this suffice what we have here spoken concerning the power and great vertue of our *Alcahest*, in preparing of Medicines and Universal Tinctures, *viz.* that whatever Metals, common or precious Stones, are put into it, it immediately does volatilize the same, and brings them over the helm, carrying them upwards, to what height we please;

for sure it is that the higher Metals mount in distillation or sublimation the purer they are. When now such pure and ætherial Spirits, are again fixed, then they are no more gross Metallick Bodies as before, but Spiritual Bodies, and Bodily Spirits; to the Eye Clarified Bodies, but indeed and in truth Concentred Spirits, which penetrate all hard things whatsoever, pass through lock'd Gates, and take away what pleaseth them; and as they can without opening the door take out any thing, so can they in like manner bring in the same again. As for instance, I draw the Colour from Gold, and introduce the said Tincture into Silver, being a fix pure and white Body, in which this Metalline Spirit takes up its abode; and the pure body of Silver greedily attracts the Tincture, because she stands in need of it; neither indeed can the porous body of Silver, resist or keep out this piercing Spirit, but passeth through warming and tincturing her throughout, and filling her pores with Solar Tincture, communicates to her not only the colour and weight, but also the nature and property of Gold.

Take another Example: Extract with our *Alcahest* by Distillation the fix Tincture out of Granates (not pulverized, but whole as they come to hand, and that for reasons hereafter mentioned) which extraction may be performed in half an hours-time, because our *Lucifer* can pass through shut gates. When now thou hast caught this Tincture in our Hellish Spirit, then thou hast it at command, and it must obey thee. If then our fiery Magnet be able to extract the Tincture from hard Stones, without breaking, or destroying their bodies, it can as easily introduce the same again into any hard, white stony body, and colour the same, light or deep, as pleaseth thee best. For instance thou drawest the colour from Granates,

which indeed do superabound with tincture, which renders them opacous, and therefore less esteemed; for we find that a Ruby being of a lighter colour, that is less abounding with Tincture than a Granate, is much more valued, whose Bodies nevertheless do in all things exactly resemble one another, differing only by reason of more or less Tincture. Indeed where the bodies differ in hardness and clearness, there the case is alter'd; but when the body is fixe, and can endure the fire, onely 'tis darkened by too much Tincture, this may easily be mended by art, onely by extracting or taking away some part of its Tincture, which will render it of a brighter colour. Which extraction of Tinctures, and the introducing of them again into pale or white bodies, may be practis'd upon all precious Stones, and to very great profit. For example, I draw, by means of our secret fire, the Tincture out of Gold or Granates, and Introduce the same into another white Stone, which must be fix, that is, such an one, which when made red hot, doth not become soft or fall to shivers, but retains its former hardness, as all those do which are called precious, because the fire can neither consume nor separate their parts, such as Diamonds, Rubies, Granates, Saphires, Hyacinths, Emralds, Topases, Chrysolites, Amethists, *&c.* All which are coagulated of one and the same water, and tinctured with the same colour; for though their colours differ, that proceeds only from the greater or lesser quantity or purity of their Tinctures, their colours, as well as their bodies proceeding from one principle. And the same must be understood of all Metals; for Gold has no better original than Iron or Copper, save only that by long distillation in the Earth, it is better purified and ripened. Observe only that in this operation you do not take Cristals, Beryls, or any other Stones

which grow soft and crumble to pieces when they are made red hot.

Some Jewellers know with the help of Fire, to mend some precious Stones whose colours are not bright and clear enough: thus they burn away the colour that is in Saphires and Amethists, making them white like Diamonds, their colours being volatile, and therefore may be taken away by Fire, but they can not introduce other colours instead of those they have rob'd them of. Neither are they able to burn yellow Diamonds to a whiteness, notwithstanding that Art has been much sought after: But our *Alcahest* can easily perform this Master-piece, for as much as it, like a subtil piercing fire, can pass and repass through shut doors without impediment, whereas all gross, corporal things are fain to stand without. For which reason I have given our secret Fiery Spirit, the name of *Lucifer*, of which *Artephius* speaks thus: *Our Fire is moist and dry, it pierces all things, dissolves, volatiliseth, and also fixeth them; it is natural, unnatural, and supernatural*: For though Nature make Gold and Precious Stones in the Earth, yet doth it not afford us such a supernatural Fiery Spirit or Stone with which we at our pleasure can make Gold and Precious stones of Earth. Therefore it is Art that brings things higher and further than Nature can, and yet the Artist cannot go beyond Nature, except he have first learnt to know Nature and taken his Principles from her. Now we know that Spirits, whether they be hot or cold, light or dark, good or evil, are of more power and efficacy than gross Bodies, for which reason God, who is Light and Life, and his Adversary Satan, who is Death and Darkness, have so great power: Though indeed the Darkness hath no more power than the Light allows or permits it to have: For the Light rules over the

Darkness, so as the Darkness can do nothing against the Light, of which matter I intend, *God* willing, to Treat further in my second and third Purgatory.

In the mean time we have here shewed, how by Art such powerful Spirits may be prepared, as can effect things supernatural; for which reason, amongst others, I have given our *Alcahest* the name of *Lucifer*: for *Lucifer* was in the beginning with *God*, an Angel of Light, whereas now he is cast into utter Darkness; so likewise our Incomparable Wonder-working *Alcahest* in its first preparation, is a bright Fiery Spirit of Light, but after its coagulation, it becomes a spirit of Cold and Darkness, binding all volatile Spirits, whereas before it made all fix things volatile and spiritual. Which that I may more fully evidence to the Ignorant and Incredulous, I shall give an Instance thereof first in Gold, and then in Precious Stones.

A PROCESS,

To draw the fix Tincture from Gold, and to make it Spiritual and Potable, fit for the Physicians *use, and that easily, in a short time, without any considerable Charges; and how the same exalted Spiritual Gold may be changed into a clarified, transparent, tinging, fix Carbuncle.*

Take of the filings of Gold, or beaten Gold an ounce and half, or an ounce and quarter, put it into a little, but strong Glass body, pour upon it two or three

ounces of our best *Alcahest*, fit a head to it, closing it well with a paper dipt in Oyl, apply a great Recipient, and lute it very carefully, for when the Spirit comes over, it passeth with great violence, and searches every where for vent, being the most subtil of Spirits, and very fiery withall: Wherefore take great care that your Lute be good, or else you will never be able to retain this Corrosive fiery spirit. The Vessel must stand in Sand, and a very gentle Fire administred at first, that our secret spirit may by degrees grow warm in the Glass, and not be too suddenly heated, for in that case it would be apt to fly away without its prey: But if you proceed, as is directed, then our moist fire will lay hold of the Gold, and carry it over in form of a Spirit, but leisurely and by degrees, at first only of a yellow colour, which afterwards comes higher and higher. Towards the latter end the fire must be encreased, till the bottom of the Glass be red hot, at which time the heavy spirits will come over, bringing the heavy Corporal Gold over with them, a red fix salt staying behind, which is of great use in Physick and Alchimy, as we shall see hereafter. The yellow spirit, as well as the red salt, may, without any further preparation be used outwardly and inwardly (the strength of them being qualified with Water, or other Liquors) and by reason of their astringent property, corroborate the Stomach of such as are old and cold, procure Appetite, consume tough Phlegm and slimy Matter in the stomach, help Concoction and strengthen the Heart, Brain, and all outward and inward parts of the Body; open all Obstructions, by reason of the fiery subtil saline spirit joyn'd with them, penetrating and cleansing the whole Body, and perform all that can be expected from a true Potable Gold.

But in order to our Metallick Transmutation, this Solar spirit must be reduced to a fix, sweet, transparent, and all penetrating Stone; the way and manner of doing which, we shall declare hereafter. Now in case we would have this our Golden spirit, to produce more wonderful effects in Physick, as well as in the Transmutation of Metals, then proceed thus: Take of Gold one part, of the Martial *Regulus* of Antimony two parts, melt them together, pour them forth, and the Gold will be white and brittle; pulverize the Mass, and put it into a small Glass body, and pour upon it three times as much of our fiery *Alcahest*, and by degrees abstract the same, and you'll have a higher and better Tincture than from the Gold alone. For *Antimony* is the *Aries* of the Chymists, wherein *Sol* hath its exaltation. This red Oyl of Gold and Antimony, may easily be changed into an Universal Medicine or Tincture, by means of our Catholick Coagulator.

And as we have here taught, how Gold, either alone, or with Antimony, may be brought over, the same may be said of the Tinctures of Iron and Copper, which have surpassing Vertues in Physick as well as Alchimy.

We proceed now to shew how with our *Alcahest*, the Tinctures of Common and Precious Stones may be extracted to great advantage. It may be of good profit also from hard fix Stones, such as Granates, which have too much Tincture, to extract part of the same, by which means of Granates, Rubies may be made, one ounce of which is more worth than 100 *l.* of dark Granates: which extracted Tincture of Granates may afterwards be made use of to exalt the colour of Pale Hyacinths, and other white Precious stones.

In a word, this art of extracting the colour from Granats, and introducing the same into other stones, is an excellent, profitable (I had almost said Royal) art, which notwithstanding is so little practis'd, by reason of the General negligence and slothfulness of men, undervaluing this excellent art of Fire, tho' more may be gain'd by it than by Merchandize or any handicraft whatsoever. Let him who is a lover of art, set upon the work, and try what God will send him. It is impossible to set down all particular circumstances of the work so exactly, but that the unexperienced may after all mistake. It sufficeth me that I have faithfully pointed out the right way towards the Land of Promise, leaving the rest to the desirous and active Traveller.

Thus I have in short words acquainted the Reader, with the way of extracting Tinctures out of Metals and Stones, by means of my New-found Infernal Fire, and that to very great and good purposes, both in Physick and Alchimy; and will now in favour of Chymical Physitians communicate an easy way of bringing the purest Souls and Tinctures of imperfect Metals, over the helm, with our fiery saline Spirit, for the effecting of wonders in both faculties. But before I proceed to the Practise of those secrets, I suppose it will not be amiss if I endeavour to place our *Sal-Armoniack* in a greater Light; for seeing by it, all must be performed, which is here spoken of; it will be needful to know what properly this word imports.

Of the Nature and Property of our New-found Griffons-Claws*, and Eagles-Wings, and what incredible things may thereby be performed in* Physick, Alchimy*, and other Arts.*

A good *Sal-Armoniack* must have these following

properties, *viz.* to dissolve, extract, and to carry that which it hath extracted in distillation or sublimation over with it; and the better it performs these, the better is it to be esteemed. Now whereas common *Sal-Armoniack*, does only lay hold of, and carry over with it, the most volatile Sulphur of Vegetables, Animals and Minerals; our secret *Sal-Armoniack* does not only seize the light Sulphur, but also the ponderous *Mercury*, and therefore is far more to be esteemed than the common. But my most secret natural *Sal-Armoniack*, extracts and carries over from all Metals and Stones their pure parts to admiration: and yet our *Griffons Talons* and *Eagles wings* are much more powerful, as not only seizing their prey with greater strength, but also carrying it away with them more swiftly, and even such pondrous things, which the foresaid cannot elevate, or take away with them.

Moreover this New-found *Sal-Armoniack* carries over the said Tinctures not coagulated in the form of *Sal-Armoniack*, but all Spirit, as being it self no coagulate, but a spiritual *Sal-Armoniack*, and meer fiery Spirit, wherefore also it is able to perform such great things. We will now proceed to the Practick part, and see whether there be such a wonderful *Sal-Armoniack* in Nature which can perform all these stupendous effects.

A PROCESS,

To prepare the highest Medicine, or Universal Tincture for Humane and Metallick Bodies, by means of our fiery Alcahest.

Recipe, one or two pound more or less of clean Filings of Steel, such as may be had of the Needlemakers, put them into a glass body, so as they may but take

up a twelfth part of it; then pour upon them a well rectified Spirit of Wine, *viz.* to every pound of Filings four or six pound of Spirit of Wine. Care must be taken that the glass body be capacious enough, else, when the Spirit of Wine begins to work on the Steel Filings, it will run over. The Body then being placed in Sand, and the Recipient ready at hand, add for each pound of Spirit of Wine in the Glass, one ounce of our *Alcahest*, which will acuate the spirit of Wine so, as to dissolve the Steel, in which solution, the Sulphur of the Philosophers, or purest Tincture of *Mars* is set loose, and immediately received by the spirit of Wine, and with it carried up to the Philosophick Heaven. But because this Soul of *Mars* has not yet obtained to that height of purity which the Philosopher desires, therefore it must enter his Purgatory, there to put off all Impurities it has brought over with it: that is, the spirit of Wine must under a large refrigeratory head be burnt away, in which flame the *Anima*, *Mars*, or soul of Iron, becomes purified to the highest degree, the flame carrying the Tinging Medicine over in form of a pellucid clear Water, which is the true Water of life of the Philosophers, healing all Curable Diseases, if daily taken in a small quantity. For this Medicine renews the Body of Man, and makes old Age young and blooming again; neither do I believe that a better Medicine can be found in the World than this is: and that because the fix *Mars* with the help of our *Alcahest*, is brought to the highest degree of subtilty, and is afterwards by the purest of Fires, yet further purged and exalted. Wherefore also like Lightning it pierceth all parts of the Body, opens all Obstructions, which are the cause of Death: And besides all this, tinges *Lune*, and coagulates Common *Mercury* into fix *Sol*, as I have often tried and experimented my self;

for I should be very loath now I am on my Death-Bed, and as it were dying, to expose any thing to the World, besides what Experience has verified to me.

N. B. When first I made this Experiment, and was doubtfull as yet whether it would succeed or no, I prepared some pounds of Martial Spirit of Wine; and though I knew that from such a spirit of Wine impregnated with *Mars*, little good could be expected, before the spirit of Wine were separated from the Tincture; and that this separation could not be made by any distillation or rectification, for that the spirit of Wine always carried the Tincture over with it, as Experience the Mistress of Fools taught me: Therefore I cast in my mind to burn away the spirit of Wine, which when I had done, I found all my spirit of Wine burnt away, and nothing remaining in the Porringer, only I perceived, that as far as the spirit of Wine had reached, it was tinged of a golden colour, higher than that of Ducat Gold. With which Experiment not being fully satisfied (though I saw that this way it was possible to make a true Tincture for Metals) I went further in my search, that I might at last be Master of so great and profitable a Work. I disposed therefore a great glass head so, as that conveniently I could under the same burn away a little dish or cupfull of spirit of Wine, but the Glass head soon broke with the flame of the spirit of Wine, which still put me upon a further trial, I took a large, broad and deep Pewter dish, placed it with the brim on three stones of an equall height, so that I could conveniently set under it a little cup with spirit of Wine: I filled my Pewter dish with Water, and then kindled my spirit of Wine, to see whether any thing incumbustible would come over with the flame, and by that time I had burnt away about two or three ounces of Martial spirit of Wine, I found that the

bottom of my dish began to drop down a clear liquor, the Tincture of *Mars* and the incumbustible *Mercury* and Salt, together with the Phlegm remaining in the spirit of Wine, being all condensed in the form of Common Water. After I had removed the Dish, and poured out the Water, I found the bottom of the Dish, the Cup in which the spirit of Wine was, and the Silver spoon I had set under the Dish, to catch the Water dropping down from it, were all thick gilt.

Having perceiv'd all this, it was easie for me to infer, that for as much as Silver and Tin had been gilded thereby, that I was in the ready way of obtaining a true Universal Tincture for Men and Metals; wherefore I ceased not to contrive night and day, some convenient Instrument, for catching of the Tincture, ascending in the flame of the spirit of Wine. And so at last after long search, I had my desire, being now confirm'd by Experience, that many pounds of spirit of Wine impregnate with Tincture, may in one days time be easily burnt away, under a Coppertin'd Head, by which means the Souls, or incombustible Tinctures of Metals and Stones are obtained; which Head, or Refrigeratory Instrument, I intend (God willing) to communicate in the Sixth part of my Furnaces.

I can allure the Lovers of Art, that no easier or less chargable way can be found than this is, for to attain an Universal Medicine or Tincture, for that according to this Process, an Universal Medicament may be had in three days time, and with very inconsiderable charges.

I shall add one or two Processes more, to shew how by means of our fiery *Sal-Armoniack*, high and noble Tinctures may be extracted, out of other

Metals and Stones, and shall begin with *Venus*.

Copper inwardly is very like Iron, and like it, is dignified with a very glorious Tincture, and by the help of our fiery *Alcahest* (proceeding as was said before of *Mars*) in three days time a true Tincture may be prepared from it for Men and Metals, thus: *Recipe* of the finest filings of *Venus*, one, two or three pounds, put them into a Glass-body, and for every pound of Filings pour on three or four pound of Alcolized Spirit of Wine, lute the Helm and Recipient, distill in Sand, and the Alcolised Spirit of Wine will dissolve the *Venus*, vivifie her tinging Spirit, and carry it over the helm, yet not visibly; but as soon as the Spirit of Wine is kindled and burnt away under the refrigeratory, then the Tincture of *Venus* appears in the form of a deep red Salt: which Tincture performs whatsoever I have before attributed to the Tincture of *Mars*. And in the same way a fix Tincture may be had from common Combustible Sulphur in three days time, as here follows.

To fix the Common, Combustible, Yellow Sulphur in three days time into a red and fix tinging Stone.

The whole Art of this Royal Work consists only in uniting the said Sulphur with Spirit of Wine, and then burning it away under a helm, to catch the incombustible Heavenly Salt, or Water of Life permanent, which with Gold becomes coagulated and fixed to a Tinging Stone. Which heavenly Salt as soon as by the flame it is separated from the Sulphur, is a true Universal Medicine against all the Diseases of Mankind: but when joined with Gold, it obtains ingress and tingeth *Lune*, and coagulates *Mercury* into *Sol*. Now to unite Sulphur with Spirit of Wine

(wherein the whole Art and Mastery consists) without any Corrosive or *Alcali*, is an easie thing, and which I have declared in my late publish'd Writings, and therefore do not think it needful to repeat the same here. I do not deny, but since that time I have found nearer ways to the Bush, but do not think my self obliged to prostitute those Discoveries to all promiscuously, it being well if I have not said too much already, and told Tales out of the School.

As to the foregoing Operation, it is obvious to conceive that Common Sulphur joined with a dephlegmate spirit of Wine, burns much stronger, and consequently with its flame will have a greater force to fix than a Common spirit of Wine can. We know that God in the beginning made the whole World of Fire and Water, from whence also all other things have their Original: For when Fire and Water, as contraries, work on one another, they always generate a third thing. The Fire, as the Agent, works upon its Patient Water, which action cannot be performed without the Air, nor can the Water without Earth have any Consistence or stability to abide the Fires action. For which reason it is that we find no Metalline Oare, but only in the Earth, and especially in such Clefts and passages of the Rocks and Earth, where a constant moisture trickles down, and whither the Central Fire can have free access, to work upon its proper Patient: From which union of Male and Female Seeds, a third thing must necessarily be produced. Now if the Sulphur which is the Male, and the Water which is the Female-Seed, be pure, a pure birth proceeds from them, and by the rule of contraries if impure, the production must be so likewise. Thus it appears that the moist Caverns, Holes, and Clefts of the Earth, are the fittest Wombs for Minerals and Metals. I am not ignorant that

Metals may also be generated in Sand or fat Earth, especially where the same lye moist; for when the Demogorgon, or Central Fire, Spirit ascends from the Center, and meets with a moist Sand or Clay, he joins with it, whence it is that oftentimes in Sand and Clay Metals are found, but not in great pieces as in the Clefts of the Earth, but only in less and greater Grains, according as the disposition of the place permits, it being notorious that Grains of Metal are oft found in Sand, and wash'd from it.

That the Subliming Sulphurous Vapor, when it meets with a slimy Matter in the Earth, doth unite with, and turns to a Metal, no Man needs doubt of: For I have seen many things in the Earth changed into Metalline Sulphurous Flint-stones. Thus we see that this Sulphurous Vapour readily cleaves to Snails in the Earth, turning them to Flint, of which I have seen many, and have some with me at present. Amongst other things I have seen a Leather Purse turn'd to Flint, as also the Privy Member of a Man, the reason of which will be obvious to him that considers of it. We know also that sometimes though rarely Metals are produc'd in the Air, and from thence fall down to the Earth, especially Iron in form of small drops, because the Air is not the proper place for the generation of Metals, for as much as they find no resting place there. Stones also are at times generated in the Air, and from thence are cast down upon the Earth. Thus in the Summer time, when the attracted Sulphur is kindled by the scorching beams of the *Sun*, and works on the moist Cloud, in a moment Stones are generated, which with Lightning are cast down thence: These are sometimes of strange Figures, but commonly are shaped like Wedges. I have seen one of them that was three-corner'd, and which way soever it was

turn'd represented the figure of a Mans Heart, and had, amongst other, this Virtue, that it preserves all those that are in the House where it is, from being any whit terrified with Thunder or Lightning. But of these matters I have treated elsewhere, being only mention'd here to demonstrate that Fire and Water are the Principles of all things; which being granted me, it will not be found strange, that by burning away Spirit of Wine, a Stone of the greatest Virtue and Power, *viz.* that of the Philosophers, should be generated: which I have not only experimented my self, but recommended it to others, who have likewise performed the same. Now if so weak a Fire, as that of Common spirit of Wine is, has the Power, by working upon its Patient, as it were, in a moment to generate an Heavenly Salt or Stone; why may not we then suppose, that when spirit of Wine by the union of a pure Sulphur, is made to burn much stronger; that this duplicate spirit of Wine, will produce a Duplicate *Mercury* or Cœlestial *Salt*? Yea, surely it cannot be doubted but that such a spirit of Wine acuated with the pure spirit of Sulphur, will not only in burning away afford a better *Mercury*, but also in greater quantity than any spirit of Wine alone can, because the incombustible *Mercury* and *Salt* in *Sulphur*, becomes meliorated by the flame of the spirit of Wine, and highly exalted in Vertue.

When Sulphur is kindled under a Bell, or other convenient Instrument, the incombustible salt of the Sulphur, mounts with the flame, in the form of a Corrosive Oyl, and is caught and used to several purposes. But this sowr Oyl, may well be compared to unripe Grapes, which being eaten, are hurtfull to the Stomach but if these sowr unripe Grapes be suffered to hang on the Vine till the heat of the *Sun* hath ripened them to a perfect Sweetness, then they

will cause no gripings or flatuosities, as unripe Grapes do, but afford good nourishment to the Body: and when the juice of them is by fermentation turn'd to pleasant Wine, it not only strengthens a weak Stomach, but revives the Spirits, comforts the Heart, strengthens the Brain and all other parts of the Body, makes Men chearfull and courageous, and drives away Sorrow and Melancholly, and in a word, is a cause of much good to the sick as well as sound.

Now if Common Wine can do all this, what wonders, think we, may then be expected from the fix soul of its purest Spirit, when by its own proper Agents flames, it is in the highest degree purified, and besides this, united with the sweet soul of Sulphur, and thereby strengthened in all its powers.

That Sulphur in its innermost is as good as Gold, none that are knowing in Nature will deny, but this doth not appear till by the flames of spirit of Wine it be reduc'd to a sweet, pleasant, fix, red tinging Salt, and then you are Master of as powerfull a Medicine, as any is in the World. *Lully*, tells us plainly, *Make that which is bitter, sweet, and you will have the whole Art*. *Basil Valentine* saith, That he who in the Chymical Art, can with spirit of Wine dulcifie a sowre spirit of Salt, deserves to be Knighted for it, as having done a most Heroical action; and adds, That with this dulcified spirit of Salt, the Tincture of *Sol* may be extracted, which is the very Truth. *Hermes* concludes his Smaragdine Table with these words: *Here ends what I had to say concerning the Solar Work*; and so say I too. I have spoke plain enough, and now catch who catch can: For I don't think my self obliged not only to catch the Bird for others, but also to pluck, roast, chew and thrust it into their mouths.

In like manner, as has been here said of Sulphur,

we may proceed with Antimony and Orpiment, for to obtain their Quintessences, as also with all Vegetables and Animals; with which pure Essences great wonders may be performed in Physick. Time will not suffer me to enlarge on the subject, but I intend (*God* willing) shortly to publish a small Treatise of the *Divine Character*, or *Seal of the Deity*, by which the World and all that is in it was at first created, and yet daily the Stone of the Philosophers and many other wonderful things are made, and brought forth a-new from the conjunction of Fire and Water, that is, *Sulphur* and *Mercury*; in which Writing, the true ground of many New Generations, which far surpass Nature, and are produced by a due combination of these two contraries, will be declar'd and laid open.

After the same Method, as before mention'd, the Tinctures of other red Metals, Minerals and Stones may be extracted. Only we are to take notice, that when we work upon Stones, 'tis best only to make use of our *Alcahest*, without the addition of spirit of Wine, for the obtaining of their Tinctures, because stones are not of so easie solution as *Mars* and *Venus*. We may also with our fiery *Alcahest* extract red Tinctures from White Sand-stones and Flints, though not in such quantity as from those that are colour'd, which may easily be guess'd. Many, 'tis like, will wonder to hear that a red colour may be extracted from white stones; but this difficulty will be removed if they consider, that all Sand-stones and Flints are nothing else, but an Earthly gross Sulphur without any *Mercury*. Now we know that Sulphur is a Father of all Metals, and that when *Mercury* and *Salt* in a due proportion is join'd with him, then he makes a Metal. We also know that all Sulphur inwardly is red, though it do not appear so outwardly till it be joined

with Salts. We have an instance of this in Lead, in which no redness appears at all, but when the same is calcined with Salt, its blackness is turn'd to a lively red, as may be seen in Red Lead. For Fire and Salt have the power to exalt all Sulphurs. Forasmuch then as the White Flint or Crystal has Sulphur in it, as appears from their giving forth sparks of Fire, when they are struck hard together, in like manner as when they are struck with Steel, which is nothing else but a fix Sulphur, that by its proper Agent, which is naturally in it, *viz.* a Vitriolate Salt, with the aid only of outward Fire, may be ripened into a True Tincture. And here I refer my *Reader* to what *Artephius* and *Pontanus* writes concerning their secret Fire, for further satisfaction.

I have prepared a particular Tincture from a white Sulphur, whereof one part tinged three or four parts of red *Venus* into *Lune*; but when I commit this white Sulphur for some time to the Fire, its whiteness becomes by degrees changed to redness, which then being projected on Copper, gives it the colour of Gold. And if the Tincture be wholly fix, it turns the *Venus* throughout to fix *Sol*, but if it be not yet fix, it can never make fix *Sol*, though it have attained a red colour in the Fire. Forasmuch then as white Flints are nothing else but Sulphur, why may not our Hellish Fire Spirit be supposed able to make the same Red, as well as the White Metalline Sulphur. I declare it therefore as a certain truth, that all white Sulphurs by means of Salt may be made fix and red; and he who is so far advanced in the knowledge of Nature and Art, as to know how to apply to every Agent its proper Patient, will easily obtain his desires without any extraordinary charge or trouble, and in a short time, for without the joining Actives with Passives understandingly in weight and measure, no good can

be done.

A PROCESS.

To Extract a Red Tincture out of all White Flints, and bring it over the Helm by means of our Fire Spirit, and afterwards to fix the same.

Recipe one, two, or three pounds of finely powdred White Flints, and pour upon them half as much of our Hellish-fire-spirit, abstract the same in Sand by retort, and it will carry the purest Sulphur of the Flints over with it, which may afterwards be fixed with our Catholick Coagulator. And if instead of Flints you take a Gold Spar, which besides some fix Gold, contains much that is Volatile, your pains will be better bestowed. And in case you cannot get any of these, then take the *Terra Sigillata*, or sealed Earth of *Silesia*, in which much volatile Gold is hid; but if you can get the Red Turkish *Terra Sigillata* of *Lemnos*, you will have a much richer Tincture, as abounding with a greater quantity of Spiritual Gold, than any of the forementioned. But take heed you be not deceived, for much of that which is sold for *Terra Sigillata* of *Lemnos*, is nothing else but *Bolus Armenus*.

Ovid and others have in their Fables made mention of this Earth, which is so rich in Gold under the name of *Vulcan*, whom his Mother after she had brought him forth in Heaven, finding him to be deformed, flung down to the Island *Lemnos*, where some Apes, that is Philosophers, who imitate Nature, took and washed him, that is, by their fiery Water, took away his ugly and deformed outside, separating the pure Tincture from the gross Body, as I have here taught. The Curious who desire to know more of these matters, let them read the experienced and

ingenious *Bracescus* his Book of the Tree of Life, who will give them full satisfaction. But if none of all these forementioned can be had, we may make use of Blood-stone, Ruddle, or any other Red Earth that abounds with volatile Gold, of which there is great plenty in most parts of *Germany*. The Red Jasper-stone, Granates, and Yellow Jacinths do also much abound with Tincture. But these and other such-like, I leave to others to find out, for it is impossible for me to mention all. I conclude this little Treatise with this Solemn Affirmation, that it is a very easie thing in a short time, and without any charges, to speak of, to prepare fix Tinctures, from common Metals and Stones. Believe and set upon the Work, and thou wilt find it so indeed.

The End of the Seventh Part.

LIBELLUS IGNIUM,
OR,
Book of FIRES.

In which is Treated of strange and hitherto unknown *FIRES*, to what end they serve, and what great Profit may by them accrue to Mankind.

Translated out of the *High-Dutch*.

Beloved READER,

That which hath moved me to write this small Treatise of Secret Fires*, with their great Operations, hath been only this,* viz. *Because* God Almighty *hath commanded us not to hide our Talent in the Earth, (like the Unprofitable Servant) but to improve it to the glory of* God*, and the good of our Neighbour. To improve and augment it, as we may see in the 16. Chap. of St.* Luke. *Seeing therefore that the most merciful* God*, hath revealed those high Secrets to me, in this my great Age, makes me judge that such great gifts of* God*, have not been discovered for my sake only, who by reason of my great Age have, as it were one foot already in the Grave; but that I might make known such wonderfull Works to the World.*

Of the first Fire, and its Profitable use.

How to make a Lamp, which being closed up in a Glass, may be made to burn continually by its own vertue, and give light without any other help.

Of the benefit of this Lamp.

Such a Lamp may serve all those who love to see light, as the Image of *God*; and may also be very available to those who by reason of continual Weakness are forced to lie much upon their Beds; which they may keep continually burning in their Bed-Chamber, not only because of its clear shining light, which doth neither smoak nor scent, like all other Combustible Lights, which scent is very prejudicial not only to the Sick, but also to the Healthy, because such smoaks offend the Heart and Brain. On the contrary, this Royal Fire is pleasant, strengthening, and refreshing to the Heart and Brain, and its Cotton or Wick is made of incombustible matter, and casts a sweet flavour all over the Room. This secret Fire might also serve the Hermetick Physicians to prepare a Universal Medicine; especially if the sweet refreshing Odour, which proceeds from it in Burning, be received in a Philosophick Receiver, and administred to their Patients, as a great Cordial, renovating, and restorative Medicine.

Although this secret Fire, be of far greater advantage than what hath been mentioned, yet for certain reasons its further use must be concealed. This Fire is appropriated to the Elemental Air, seeing it hath its own Air in it self, by reason of which it burneth in a Glass well closed, and if touched by the least Air, it extinguisheth and goeth out, of which you may see more in the Fifth Part of my

Pharmacopœa Spagyrica.

There is another unknown Fire, which is appropriated to the Earth, because it resembleth a black Earth, and being shut up in a close Vessel of Glass, will keep its Fire perhaps to the end of the World, provided there cometh no Air into the Vessel; but if one would have it a visible Fire, the Glass must be broken that the Air may come to it, so the matter will presently enkindle it self by the Air, and in a short time burneth to a coal, yet without flame or smoak, and at length is consumed, and leaves heavy Ashes behind.

Of the Use of this Earthy Fire.

Although it may seem to many, that this Fire is not fit for any thing, yet I affirm it to be fit for great and weighty matters, which are not fit to mention, much less to make known, by reason of the abuse which may be made of it; this Fire being ten times more forcible than Gun-powder. Moreover, it also plays its part in the Melioration of Metals, for when this black Earth-fire is fluxed in a Crucible, then poured out, and exposed to the Air, it begins to move, and grow as it were living, so that one may see how forcibly it attracteth the Air, fills it self with puffing Bladders like an incensed Toad, continuing such a motion for the space of three or four days, then the matter falleth asunder, and there floweth out of it a red firey juice, the remainder is dead and unprofitable.

With this red juice, wonderfull things are to be done in Alchymy, not necessary to be mentioned in this place, because it is my desire onely to make known the Wonders of God. But he that will know more of it, let him read the Fifth Part of my *Pharmacopœa Spagyrica*, treating of the Stone of the

Wise, where he will find how the blood of this Toad doth in few hours draw the Colour of Gold, so that the Body remains white, therefore it may be supposed to be the Chalybs of *Sendivogius*.

This Fire is also made of Steel, for when it is touched with a wet finger, sparks fly from it, as from a red-hot Iron which a Smith is forging upon an Anvil. But enough at this time of this wonderfull Earth-fire till another opportunity. *Ripley* seems to have known this Fire, and of it to have prepared his Universal Tincture: his Dream sounds thus, I have seen a red Toad drink so much and so long of the juice of the Grape, till his inwards did burst asunder, *&c.*

The third Secret Fire is appropriated to the Elementary water, because it softeneth and dissolveth all hard Subjects; it also radically joyneth the different nature of Metals, into wonderfull tinging Stones. Seeing that this Water-fire is of great vertue to the Metals, both particularly and universally, I am resolved (for brevity sake) to make known its vertue in a few cases, the rest will be known by the diligent. First, this wet Fire hath such great vertue, that it can dissolve radically the most fixed Gold, within the space of twelve hours, as also to unite it with *Lune*, to volatilise and render it irreducible. Which volatile *Sol* and *Lune* is no more like unto *Sol* and *Lune*, but in colour, easie flux, form and weight, appeareth like unto black *Saturn*; therefore the ancient Philosophers, because of its form and similitude, have called it the black Lead of the Wise, and because of its volatility the *Mercury* of Philosophers; which *Mercury* or black Lead of the Wise may be also *per se*, brought into a true Tincture.

Therefore they have all erred, who have taken

Antimony for the true black Lead of the Wise. He that will know my failings in this matter, let him read the Third Part of my *Pharmacopœa Spagyrica*, where he will find Wonders, especially how I have cleansed it to the highest degree, and concentrated it into a white Mercurial fusible Stone, which doth shew such vertues in Medicine as are to be admired. This white Stone hath such vertue, that it cureth all diseases, if it be held every morning onely a while in the mouth; of which I have treated more clearly in the Fifth Part of my *Pharmacopœa Spagyrica*. This true black Lead, which by this humid Fire, is made of Common *Sol* and *Lune*, hath no equality with *Antimony* nor other common Lead.

What else is to be done in the particular Melioration of Metals, doth not belong to this place, but shall, by the help of God, be declared elsewhere.

This moist Fire hath power to extract all *Sol* and *Venus* out of *Lune*, in few hours, if the *Lune* be first granulated, and then put into it, without dissolving the *Lune*, so that the *Lune* remaineth almost as fine as from the Test. The extracted *Sol* and *Venus* may easily be separated from the Water, each by it self, by precipitation, insomuch that the Water retains its vertue, and there is no loss either of the *Sol*, *Lune*, or *Venus*. In like manner the allay of *Sol* and *Lune*, by *Venus*, may be extracted with ease, in great plenty, and for little charge. Which Secret would be of great use to Refiners, or such as have much Gold and Silver to be parted, as in Mines, *&c.*

It is sufficiently known what great labour and charge is required by the common way of parting Gold, and Silver, and Copper, *&c.* therefore needeth

not to be repeated.

Here followeth a shorter and easier way.

First, if my impure Gold be in great lumps, I grannulate it; but if it be Jewels, Rings, or Chains, I onely neal them, and therewith fill a parting glass to the third part, then I pour thereon of my cheap and new-invented *Menstruum*, so much as may swim above it a fingers breadth, put a Limbick upon it and set it in a Sand furnace, give fire by degrees till the Liquor boil, and be all gone over the Helm, to a dry Salt. So hath the *Aqua Fortis* in the time of digesting drawn to it self all the allay of *Lune*, *Venus*, or other impurity, out of the Gold, in form of a green Powder, which remains with the Gold in the Glass. When it is cold, I take it out of the Sand, and put in warm Salt water, to dissolve the extracted *Lune* and *Venus*, that it may be poured out of the Glass: which done, I boil it in a Copper Kettle, so the Salt-water extracts the *Lune* and *Venus* from the *Sol*, and maketh it fine. I decant the green and thick water from the *Sol*, and put to it in the Kettle fresh Salt-water, and boil it to extract the rest of the *Lune* and *Venus* from the *Sol*. But if this second Water should yet be green and thick, that is a sign that there yet remains more *Lune* and *Venus* with the *Sol*; therefore more fresh Salt-water is to be added to the *Sol*, as before. After boiling, put all the green Waters together, and at last pour upon the Gold onely common sweet water, with which boil the Gold to extract the remaining saltness from it, which will leave it fine and shining in the Kettle, as fine Gold useth to be, which is to be set upon a small fire to dry, then to be kept as fine Gold. The green Water is to be filtred, so the *Lune* will remain behind in the filter, which is to be dried, and mixed with the common fluxing Powder of *Sulphur*

and *Nitre*, and being melted will be reduced to the finest *Lune*. Boil the green filtred Water in an Iron Pot, so all the *Venus* will settle to the Pot bottom, which is to be edulcorated with Water, and being mixed with the above-named fluxing Powder, and reduced becometh the finest *Venus* that can be seen with eyes. By this means I doe not onely find all my *Sol*, *Lune*, and *Venus*, but also an increase of the *Sol*, the reason of which increase proceeds from my *Aqua Fortis*, which is a graduating Water, and of a meliorating nature and property: which encrease indeed is not over-great, yet it pays for all the charge of Coals and Labour. This work may be performed in the space of twelve hours without any loss of *Sol* or *Lune*; which differs greatly from the tedious vulgar way of separation, which is very laborious and costly, besides the great loss of the *Sol* and *Lune*. So that ten Marks may be easier separated by my way, than one Mark by the common way.

One great Secret more, above others, which for brevity sake cannot be all inserted here, is this. It is well known to all Chymists, that all Vegetables, as also Animals, by addition of common Water, may be brought to fermentation, and according to every subject, a *Spiritus Ardens*, of great use in Physick, may be distilled. But how to make such a subtile Spirit out of Metals, I never read in any Authour, nor heard of. But I have found out a way by which great matters may be done, which cannot be mentioned here, let others search after it as I have done, it is not good to cast Pearls before Swine. Yet that the desirous may know somewhat of an Artificial Metallick Fermentation; I say that out of certain Salts a Water may be prepared, which when it is put upon a compact Metal, that the same by a certain property in the Water, begins to swell up and ferment, like to

the fermentation of Wine, Beer, or other vegetable Drinks; and after fermentation, by distilling in Balneo yields an exceeding subtile penetrating Spirit, strong, sweet, and volatile, according to the nature and property of the Metal; which may also by rectification be concentrated and subtilized, like that which is drawn from Wine or other Vegetables, without any Corrosion; so that such a Spirit may be put into the eye without the least hurt, or sence of sharpness. [See the Sixth Part of the *Pharmacopœa Spagyrica*.] Therefore it may easily be concluded, that such a Metallick Spirit may effectually be used in the most difficult diseases. But those Spirits are not onely highly profitable in Medicine, but cannot also fail to shew their effects upon Metals; for I have already experienced thus much, that the Spirit of *Sol* doth in few days graduate Common *Mercury* into *Sol*, in like manner doth the Spirit of *Lune* and *Jupiter* graduate *Mercury* into *Lune*; other Spirits of Metals I have not yet tried. And although many may think to force such a Spirit out of Metals as is drawn out of Vitriol, yet they err, because every Vitriol distilled *per se* besides the Phlegm, acid Spirit, and heavy Oil, yields also a volatile Spirit, which may be very much subtilized by rectification, but it hath no comparison at all, nor likeness with my new-invented volatile humid Spirit of Metals; because the above mentioned volatile Spirit of Vitriol, consisteth onely of a subtile salt Spirit and spiritual Sulphur, which may sufficiently be demonstrated. For when such a subtile salt Spirit of Vitriol stands a while in a Glass close stopped, the volatile Sulphur of the Vitriol sublimeth it self to the top of the Glass, and congeals it self in the form of common yellow Sulphur, and the humidity remains in the Glass like an insipid Water, without smell or tast. Therefore the volatile Spirit of

Vitriol now-a-days prepared, is to be esteemed for nothing else but a volatile Spirit of Sulphur. In opposition to which my Metallick Spirits, especially those of *Sol* or *Lune* have no combustible matter in them. Also the Spirit of Vitriol is yet corrosive, which the Metallick Spirits are not. Therefore let no man think that my invented Spirits of Metals are of the same nature with the sulphureous Spirit of Vitriol, Allom, or common Salt, or the like, but let it be esteemed as a new-invented high Secret, the like of which was never yet known to the World. He to whom God shall please to reveal how these Spirits of Metals may again be brought into fixed bodies, such a one may well esteem himself happy. Seeing that such a Spirit being yet fugitive, can mortifie running *Mercury*, and transmute it into *Sol*. Also know, that our secret Salt-water hath power to bring other Subjects into fermentation: As for example; if I was willing to bring Tartar again into fermentation, to try what Spirit it would yield, I dissolve it onely in fair water, and put to it a little of our Universal ferment, so will the Tartar presently begin to ferment and work, and yields a wonderfull volatile Spirit, which is not to be had by any other way. Here I will add onely one thing by way of history; namely, what happened unto me once, when I joined a little of this ferment with some Urine: that the same did presently begin to ferment, and yielded a most dreadfull scent, so that I was necessitated to carry the Urine out of the room, the smell was so offensive, that it enfeebled my Heart and Brain; and in the distilling, yielded a scent far worse than the putrefying of any dead carcasses of beasts, at last I forced over all the unpleasant Phlegm, took the *Caput mort.* out of the Glass, and distilled out of it a strong Corrosive Spirit, with which I did dissolve *Sol* and *Lune*. But what is

further to be expected from it, time will shew me. There came also with the strong salt Spirit, a red Oil of Urine, not strong.

To enlighten the former discourse, there remains yet something to be said, namely this: That the before mentioned Spirit of Metals may be handled in all respects like the burning Spirit of Vegetables, which is distilled from Vegetables fermented; in rectifying, the most subtile Spirit cometh over first, and the unprofitable Phlegm remains behind; and the oftener this rectification is performed, it is the more pure, subtile, strong and pleasant, so that the vertues of all other Vegetables, some of this Spirit being poured upon them and digested, may be extracted, and separated from their gross feces, by separating the Spirit of Wine in Balneo, so the vertue of the Herb, Root, or Flower, will remain in the Glass; of which one onely drop hath more vertue in Medicine, than a whole handfull of the herb from which it was extracted; yet the Spirit remains good, and is always proper for the like occasions. But if one desireth no Extract, but onely a Spirit of Vegetables, strong and forcible in its operation, then must the Spirit be put upon fresh well-scented cordial Herbs, Roots, Flowers or Fruits, digesting them together, then abstracting the Spirit again, so will it be much stronger, subtiller, and of a more refreshing smell than before. Thus in like manner can we doe with our Spirit of Metals, and make it as strong as we will, by putting the same upon fresh Metals, and letting them ferment together, then abstracting, and so fermenting and abstracting, whereby it always grows stronger and stronger, so that afterwards greater things may be done with it both in Medicine and Alchymy. If then the simple Spirit of Metals doth

wonders in Medicine and Alchymy, what will not this doe, that hath three or four times its strength? Consider of it, enough to the wise. The Spirit of Metals thus made we esteem for the true *Aqua vitæ* or *Vinum salutis* of the Ancients, and no other made of Vegetables. Take notice also by the way, that our Ferment doth not lose its vertue in distilling, but serveth always for the like Works, to wit, the Fermentation of Metals.

Seeing that our Ferment is a volatile Salt, after Fermentation the subtile Spirit is abstracted, and the Phlegm received by it self, so at last riseth our Ferment with a stronger Fire, and leaves the mortified Metal as unprofitable feces. So that the Ferment being once had, it may be often used, yet it is somewhat diminished every time by sticking to the glasses, yet not being costly, the loss may be easily born, so that there needs never be no want of it. This is indeed a wonderfull subtile metallick Wine, of which I had once a Vision about thirty years ago (with these words: *Ex fece, de fece, debes carpere vinum tuum*,) yet I knew not the signification to this time. I have had much thoughtfulness about it, yet all in vain, untill God was lately pleased to shew me the way of preparing such Wine.

If I should write all things which may be done with my new-invented Fermentation out of Vegetables, Animals and Metals, I should have work enough for a great Volume, and as it were bring forth a new World: but let this suffice at this time.

Next followeth the fourth Secret Fire of the Wise, to perfect an Universal Medicine both for Men and Metals.

That the ancient Philosophers did make their Universal Medicine, not out of one Subject onely, is clearly to be seen out of their Writings. And as their Subject was divers, so have they also used several Fires to decoct their Subject; for some Subjects, as fixed *Sol* and *Lune*, they have made volatile by their humid Fire, and again made the volatile fixed by means of the known fire of Wood and Coals. Therefore have they so positively affirmed, that without common Gold and Silver, no true Medicine for the Metals can be made. And this, by reason that other Subjects were yet unknown to them; and they knowing no better, thought theirs to be the onely way by which the Universal Medicine could be made. But others have wholly rejected *Sol* and *Lune*, saying they are dead, and that one should beware of them; but that their *Sol* and *Lune* were living, and that no commonly known fire could ripen them, that a far other fire is required for that purpose; these and the like contrary Writings (although they are both true) have confounded the Searchers, so that one esteemeth one Writer, and another, another, and yet are always doubtfull after which Authour they should work. *Pontanus* confesseth that he erred two hundred times, although he wrought in the true matter, and should never have understood if he had not read the old Philosopher *Artephius*, and of him learnt the Secret Fire. He describes also the Secret Fire in the same manner, which *Artephius* doth, to wit, thus: *Our Fire is no Common Fire, it is Artificial to find out, it dissolves, destroys and penetrates all things; it is equal, continual, and constant, burning with our Glass, and not without*, &c. Our Subject is also no common *Sol* or *Lune*, but as yet an unripe Mineral, on which Nature hath but begun to operate. All they who have wrought in such unripe *Sol* and *Lune* have

also of necessity known this Secret Fire, or else they have failed, and could accomplish nothing. Some have known the volatile Gold, as also the Fire belonging to it, and yet could not come to work with it; the reason was, because they as yet wanted the instrument belonging to it, because if a volatile matter be to be ripened in an open Glass with a flaming fire, it is impossible but that the volatile *Mercury* should fly away; and if a Receiver were applied to receive the volatile Spirit, then by that means the Fire would be stifled and go out. Here is good counsel at a dear rate, but the discovery of the secret Vessel maketh all cheap again; for without the knowledge of this Vessel, little is to be done. Is it to be an Universal Work, so must it also agree with the Universal Work of this world? We see daily how that the warm Sun causing its beams to descend downwards upon the Globe of the Earth, causeth all Vegitables, to grow and multiply, and not onely Vegetables, but also Animals and Minerals, as *Plato* witnesseth in these words: *The Sun and Man generate Man.* So that the oftener the beams of the Sun doth draw up the moisture of the Earth, and let it fall down again in Rain, by so much the more it maketh the dry Earth fruitfull, by which means the Fruits of the Earth sprout forth faster, ripen, and multiply; because the moisture when drawn up in the daytime by the Sun-beams, always leaveth behind it its fruitfull Salt, which it had attracted from the Air, in the bowels of the Earth, and is still again impregnated with the influences of the Heavens; for without the Air, nothing can live, encrease, or multiply, the which *Hermes Trismegistus* hath very well given to understand, when he saith all which is above, is also below, by which wonderfull things are brought forth; the Sun is its Father, the Moon its

Mother, the Wind carrieth it in its belly, the Earth hath conceived it and brought it forth, and is its nurse, by continual ascending and descending it hath obtained its force, and its vertue is compleat, when it is transchanged into Earth, *&c.* Here *Hermes* gives sufficiently to understand, that the volatile matter of the Stone is elevated from the bottom of the Vessel to the middle region of the Air, and must again descend to the Earth, that by its continual ascending and descending it may be made to live and encrease, as it is in the great World. But how to make this ascention and descention as it is and ought to be done in the Philosophick work, is not permitted to be divulged: but it is more than enough to discover and assure that in such a secret Furnace and hidden Fire, the volatile Gold of the Wise may be ripened into a living Medicine. *Amen.*

[Here should come in a small Treatise, entitled, *The Explication of* Solomon*'s Words*: Viz.

In Words, Herbs and Stones, there is great vertue. *But who this* Solomon *was, is altogether uncertain; and the Treatise it self consisting of nothing but fabulous Stories of divers Events, which followed upon the speaking of certain words at divers times, and upon divers occasions, and containing nothing (as I conceive) that will be useful either for a Christian, or an Artist, I think fit to leave it out; and more especially, because this Treatise is wholly foreign to the Authour's knowledge and experience, but taken upon trust (as to matter of fact) at random, and from others, which is disagreeable from all the other Writings of the Authour. All that I think worth the Translating is somewhat relating to the Colouring of*

Glass; which take as follows.

With one pound of pure Glass, mix about a dram of the Ashes of Copper, [or *Crocus Veneris*] and melt them together in a strong Fire, and you'll find a green Glass, resembling the *Onyx-stone*. In like manner also a whole pound of Glass is made like to the fairest *Saphire*, if a dram of *Cobolt* or *Bismuth*, melted, be added to the *Scoriæ* or Dross. Likewise one dram of the Rust of Iron changeth a whole pound of Glass into a yellow Stone, emulating an *Hyacinth*. If one shall melt a dram of the Tincture of Gold, or of the Philosophers Mercury, extracted from Gold and Silver, with a pound of Glass, that Glass becometh very red, like a *Ruby* in colour, as I my self have found. But if any shall be so fortunate as to make this Glass hard, as well as of a beautifull colour, he will need to take but little pains for his living.

There is a short Discourse adjoyned to this, called, The Quintessence of Metals*; but whatsoever is mentioned in that, is contained in the Fifth Part of the* Pharmacopœa Spagyrica*,* Book of Fires*,* Book of Dialogues*, &c.*]

The End of the Second Part.

THE THIRD PART
OF
Glauber's WORKS.

A
TREATISE
OF THE
Three Principles of Metals,
VIZ.
The Sulphur, Mercury, and Salt of Philosophers,
HOW
They may profitably be used in *Medicine*, *Alchymy*, and other Arts.

Of SULPHUR.

That Sulphur *is one of the Principal Columns of Medicine, and also a Primary Part of the Three Principles of Metals, is more than sufficiently manifest; also, that in it is reconded much good, several Books left unto us (published by Ancient and Modern Authors) do clearly witness. But those Books, for the most part, all of them are obscurely written, and every notable and most remarkable thing is by them both concealed and manifested. Hence it was most usual, of it to prepare certain Vulgar Medicaments; as,* Yellow Flowers*, a* White Magistery*, a* Red Balsom*, and an* Acid Oyl per Campan. &c. *But among all other,* Paracelsus *in Writing hath most clearly unveiled the same; yet so warily, as few could perform the like, although many diligently searched.*

Therefore, since the Writings of this most highly illuminated Man are able to give a good Testimony of Truth to this my Work, I thought it very convenient, to insert a part of the best of his Writings in this small Treatise of mine; whence it will appear, how our Art is carried on and Augmented Yearly. The Words of Paracelsus *are these which follow.*

Of SULPHUR.

GOD hath created *Bitumen*, endued with many rare and admirable Virtues, not only conducent for the necessary use of a *Physician*, willing and ready to heal the *Sick*, but also for the vast Phantasy and Operation of Chymistry. Besides, in it are many other Virtues, which wonderfully discover themselves by *Sulphur*, because it is the true *Bitumen*. Wherefore I thought it worth my while, not only to describe the

Medicinal Virtues of *Sulphur*, but also the Chymical, and many other associated Virtues of the same, in every other Profession and Business.

It is to be owned, that many things have been writ of *Sulphur*; but the true Foundation of the true Virtues thereof, hath scarcely yet by any Man been exactly enough touched or proposed. But those Writers are to be blamed, who would describe all things, of which they have no understanding, because, in so doing, they did indeed compose and prescribe somewhat; but nothing fundamentally, or according to its genuine Disposition and Property, as in Writing and Describing is requisite. For in truth, they themselves understood not, yet (through their ambitious Haughtiness) they would compose Books, consisting of Letters only, without Soul or Spirit. But I, as One experienced, present you my Experience of *Sulphur* in all things, *viz.* What *Sulphur* is with respect to *Medicine*, *Alchymy*, and all other associated Artifices. Therefore know ye, that in *Sulphur* (but it is in GOD only to hinder) are wonderful, and those so admirably famous, Things, as thence the natural Light of Man may derive Cause enough for Wonder: Or else, (if GOD prohibit not) the Fault is in the Artist's handling it; which is a thing very probable. For, when every babling Sophister thinks himself a Physician, and every Finical Fellow will be accounted a Chymist; then it comes to pass, that Arts can never be rightly exposed to publick view. But howsoever the Matter is, the Foundation lyes here: In *Sulphur* (for either Faculty) are insited so great *Arcanums* and Powers, as almost no Man can throughly exhaust them; and also so great Virtues, as will cause admiration so every Man. For in very deed, according to the Experience of all Men, (in either Faculty) there are so many things worthy of

Note; because in *Sulphur* is such an Efficacy, as few like unto it are given, nor in *Chymistry* and *Medicine* can its second be found. Yet *Aristotle* defames that, saying, *Transmutation of Species cannot be*. But *Sulphur* suffers Transmutation: Which is sufficient to prove, that *Aristotle* (if he were now living) might be convinced of his Folly, even by Women.

No Physician or Chymist should convert Sulphur to his Uses, according as it is found in it self; but separated into its *Arcanum*, and purely freed and cleansed from all Impurities, until it is so purely clean, as its Virtue exceeds the whiteness of Snow. *Hyssopus*, that is, the *Art of Separating*, doth this; it was anciently called *Hyssopaica*, in Alchymy and every Separation. Yet Sulphur is of admirable use for its vulgar Businesses, or common Artifices. Now, that I may more accurately explain ♆ to your Comprehension, I will first distinguish it according to its Nature. For it is not produced from one *Matrix*, but from many. Wherefore also, it acquires divers Operations, that is, hath in it self various affections, not one disposition only, but peculiar peculiarly. And that the Physician may not err, I will here present to him the Nature of that Sulphur, which is best for his use in Medicine; also to the Chymist, I will exhibit the disposition of that, which is profitable in Alchymy; and lastly, I will shew, how far it is conducent for every common Business. Therefore the Instruction being first premised, its use shall be superadded, not only in Medicine and Alchymy, but also in other common Vocations; that every Man in his own Operation may know, how to use and apply the same, without mistake or Error.

Touching the *Embryonate Sulphur* of Metals, *viz.* what is invisibly contained in it, thus take it: That ♆

in Diseases doth so admirably conserve and restore its own Member, as it manifests the Members to stand in need of a Mineral Medicament only, and no other. Hence the ♆ of ☉ is conducent for the *Heart*, of ☽ for the *Brain*, of ♀ for the *Reins*, of ♄ for the *Spleen*, of ♂ for the *Gall*, of ♃ for the *Liver*, and ☿ for the *Lungs*.

Also there is found a kind of *Embryonate Sulphur* in Wood: But that ♆ is Fire only, which no Man can preserve in its Life and Essence otherwise than in the Wood, with which it passeth away, and dyes. Such is the ♆ of all things which are Woody, or whatsoever it be, that is plainly reduced by Fire into Ashes. This ♆ is Vegetable, but not fixed; nor is it conducible for any thing at all, except those things, which are to be prepared by Fire. Now be it known to you all, that that ♆ indicates the Virtues of other Sulphurs, this way: As Fire devoureth all things, so every ♆ is an invisible Fire, which doth invisibly absume Diseases so, as Fire visibly consumes Wood. Wherefore the *Element* of *Fire* is a singular *Arcanum* in all Diseases. He that wants this Element of Fire among his Secret Medicines, ought not in any wise ascribe to himself the Name of a *Physician*; nor can he shew himself an Expert Physician, but is rather an Erroneous Operator, and a Robber of the Sick. Further I say, ♆ is the *Element* of *Fire*, and if any one would have it exercise the facilities of a Medicine, let him take care to volatilize it so, as it may vanish like a Flame; that is, let it be so subtilized, as it may recede from its own Body, and the Body be separated from it: For the Body is not the *Element* of *Fire*. *Sulphur*, rendred thus Subtile and Volatile, is the Consumer of what is to be consumed, that is, what is not fixed in Nature, so Diseases are not fixed, but the Body is fixed against the Element. And the Element of Fire is only

adverse to that, which is not fixed against it, that is, adverse to *Diseases*. Now would *Pseudophysicians* so order the matter, as our Philosophy might find place, and receive Encrease in the *Schools* of *Physicians*, the Trifles and Impertinencies of Humorists (who grope in Medicine as a Blind Man, that knows not which way he goes) being totally rejected, many Homicides, daily perpetrated by their Rashness, would be prevented. In the mean while, since they are Men of no Conscience, what can you do, but leave them to their own perverseness? He that is desirous to act as a true Physician, let him seek the Virtues of Elements in Natural things; there he will both find the Truth, and a Remedy against the Diseases of the Sick.

There is a twofold kind of Embryonate ♳; one fixed, but notwithstanding made Volatile; the other, pure Fire; that is, one is Living Fire, the other Insensible Fire; yet both the Sensible and Insensible are exercised in like Consummation; *viz.* one in Wood, the other in Diseases. Every Man, affecting the Health of others, might by these few words be sufficiently instructed, if GOD withstand not his Endeavours; but I judge every Man shall not be made Wealthy, because GOD well knows, why he hath given the Goat so short a Tayl. For since Riches do very often seduce Poor Men, cause them to put off the Habit of Humility and Modesty, and transform them into proud and insolent Animals, therefore it is more safe to keep silence, and leave every one to his own poor estate.

Now know ye, touching *Sulphur* and its Species; what the Nature, Property and Essence, of the same is. Whosoever shall attempt to describe *Sulphur* in a most accurate manner, (as is fit, though not expedient) will have need of abundance of Paper.

But for handling ♃, a judicious Chymical Operator and Experienced Artist is required; such a one should be very expert and solidly grounded in his Art, no Airy Talkative Person, whose Art consists in Lip-labour only; but one, that proves himself an Artist by the Labour of his hands: For such a Man will be able to extract from ♃ more wonderful *Arcanums*, than any Man can describe with his Pen. But, he that knows nothing of *Sulphur*, knows nothing at all, nor is it convenient, he should say any thing, either in Medicine, or in Philosophy, touching any of the Secrets of Nature.

Of the Use of this Element *of* Fire*, which* Paracelsus *hath so earnestly commended to all Physicians.*

First, this Tincture of ♃ may be exhibited in all Diseases, for comforting the Brain, Heart, and all the Internal Members of the Body, because it is famously subtil, savoury, and sweet; and is a Medicine most excellent, especially in Affects of the Lungs. Also, it is the most penetrating of salutiferous Balsoms, for curing every Body internally hurt, and for restoring all vitiated Members to their pristine Sanity; in so much, as, in this respect, you can scarcely find any other *Remedy*, second to this in Virtue. Therefore it may very well serve instead of *Aurum potabile*; but in firey Diseases, it must be warily administred. This Essence of ♃ strengthens weak Stomachs, and gets a good Digestion. In a word, in all Distempers whatsoever, except Burning Feavers, it may be safely used.

Note: If any one shall extract a red Tincture from fixed ♃ rubifyed, he will enjoy a most present Remedy, not only for Men, but also for some Metals;

namely, for tinging ☽ and ☿ into ☉. This is that, which *Paracelsus* commended to all the Rivals or Sons of Art so highly, that I thought I should do very well here to subjoyn his own Words, as they are written.

Mortification of *Sulphur* is made, when its combustible and fetid Humidity is taken away from it, and the ♃ reduced to a fixed Substance, which is done thus.

℞. Common yellow ♃, which reduce to a fine Powder, and from it three times abstract a most strong *Aqua Fortis*; then the ♃ remaining in the bottom, will be of a black Colour. This edulcorate with sweet Water, and so oft distil the Water thence, as until the Water come off wholly sweet, and smells not at all of Sulphur. Then take that Sulphur, and reverberate it in a close Reverberatory, like *Antimony*. In Reverberating, it will shew it self, First, White; Secondly, Yellow; and Thirdly, Red; as *Cinnabar*. Having brought it to this pass, thou mayst rejoyce; for that is the beginning of thy Riches. For this Reverberated Sulphur in Tinging, renders every Silver into the best Gold, and the Humane Body into perfect Health, more excellently than can be described. Of so great Virtue is this reverberated and fixed Sulphur, &*c.*

Elsewhere, *Paracelsus* writes of the Transmutation of Metals and Gems, thus: As you now have seen a very brief way of some peculiar Transmutations of Metals; so here further know ye, touching the Transmutations of Gems, that is, of small Stones, that of such Transmutations also there are various ways, some of which notwithstanding seem in no wise adverse to others. For you see how potent a Transmutation of Gems lyes in the Oyl of Sulphur.

Every Crystal, that is left in that Oyl for some time, is tinged and transmuted, and may by graduation with distinct Colours be so exalted, as to exceed a Natural *Jacynth*, *Granate*, or *Ruby*, *&c.*

Paracelsus here teacheth the fixation of ♄, if a most sharp *Aqua Fortis* be several times abstracted from the same, reduced to a fine Powder. But that way of proceeding will profit nothing, because the *Aqua Fortis* is not capable of any Ingress into the ♄, because that is first to be procured by Salts, as we above taught. For then the Artist's Endeavour will succeed well, and the ♄ in Abstraction of the *Aqua Fortis* be fixed, and also wax white: But Redness is afterward given to it in an open Fire, or Fire of Reverberation. And it will never wax red in a close Vessel, how long soever it stands in the Fire. And when it is thus Red, every common Spirit of Wine extracts not its Tincture, because it hath not ingress into it. But the fixed red ♄ must first be melted with fixed Salt of *Tartar* in a very strong Fire. That way is given to it such an Ingress, as any Spirit of Wine can extract from it its Tincture. For otherwise you shall labour in vain. *Paracelsus* intended rather to keep this Experiment to himself only, than to expose it to the use of the ungrateful Vulgar Sort. But no Man hath cause to wonder, why I now am desirous to discover the same openly, since I have peculiar Reasons of this Publication, an account of which I am not bound to render to any Man. It is sufficient to any grateful-minded Man, that I am willing publickly to discover that Secret.

This fixed Tincture of ♄ is in Medicine much more efficacious, than the Element of Fire, described by *Paracelsus*. For That is only extracted from a Volatile Sulphur; but This is fixed; and is also of power

sufficient to cure the fixed Diseases of Men, as well as Metals. The Volatile Tincture, or Element of Fire, as it is called by *Paracelsus*, is otherwise also famously conducent for External Uses. All affects of the Skin, as Scabs, and the like, are cured by the help of that. Also to every Wine it is a present Medicine. For if any one put a little of it into a Cask of Wine, the Wine acquires a grateful Tast and Odour, and will be so comforted, as not easily to admit of changing or perishing, as otherwise is wont to happen to common Rhenish Wine. I did indeed, for tryal sake, pour same of this into divers Wines, and found it so in very deed. For I put one or two drops of our Element of Fire into several open Cups filled with Wine; and I daily observed them, until I found, that that Wine, in which none of the Element of Fire was put, did in two or three days contract a slimyness; but those, in which a little of the Element of Fire had been mixed, stood almost three Weeks, before they began to contract the like. Which business of Wine, if any Man well consider, he may find out the way, how, by the benefit of this Art only, far more easily to acquire sufficient Gain for daily Sustenance, than otherwise by the perillous ways of Merchandise. Wherefore, whosoever is desirous of enjoying Profit in Wines, let him always take care continually to have ready prepared by him a good *Sal mirabile*, and reduce Sulphur into a red firey Stone; otherwise he will lose his Labour and Cost, which, by way of Admonition, I was not willing to pass over in silence. Therefore I must say, with *Paracelsus*, that all those Physicians and Chymists are not of the best Fame, who have the Gift of Glorious Eloquence; but those only, who have learned their Understanding by long use of Fire; and whilst elaborating Subjects, to be prepared, do well know,

what should be added and substracted, according as the Operation of every thing requires.

Since we now know, what *Paracelsus* taught touching the fixation of ♄, and also the profitable use thereof in Medicine and Alchymy; it will in no wise be impertinent in this place to insert, what *Basilius* hath written touching the same; that by his Words every Man may the better discern, that my fixation of ♄, which I have described to be made by the help of *Salt Nitre*, differs not from the Writings of other Philosophers, speaking of *Salt Nitre*. The aforesaid *Basilius*, (who, in many places of his Writings, mentioned the fixation of ♄ by help of *Salt Nitre*, but obscurely enough) among other things, thus writes.

[*Here* Salt Nitre *is introduced, speaking of himself and to himself only.*]

Sulphur indeed is my most mortal Enemy, and he is also my best Friend: For when we both are joyned together in Wedlock, and our Marriage celebrated in Hell, so, as we both sweat well together; then we shall so put off all Impurities from us, as in our dead Bodies may be found the greatest Treasures, and of us be progenited wealthy Children, *&c.* By which words, *Basilius* intimates, that *Salt Nitre*, by the Contact of ♄, is inflamed, and, as by an Enemy, wholly burnt up and reduced to nothing; and therefore is accounted its greatest Enemy. But if *Salt Nitre*, in form of an *Aqua Fortis*, be associated to ♄, and render it fixed and constant in Fire; they then become the greatest Friends, and from them both are procreated Rich Children. Therefore whosoever is desirous to obtain such Children, let him bend all his thoughts to the matter it self, and diligently search; for he may find, if GOD be pleased to indulge him

and permit the same.

Whatsoever *Paracelsus* hath here writ of ♳, he hath undoubtedly writ plain enough, so as Credit may safely be given to his Writings. For that what he saith is not from the purpose, *Every Man may be informed by these few words*, *&c.* Certainly he, had he not dreaded the impiety of the World, would much more evidently have explained this, and by that means he would have helped the Necessity of many; but the notorious Ingratitude of the World deterred the Man.

Also *Paracelsus* admirably discourseth of the *Element* of *Fire*, how excellent a Medicine it is, as I my self have experienced, and shall further in time to come (if GOD permit). In like manner, the same Man makes mention of the noble *Hyssopaick Art*, by the help of which, ancient Philosophers did, with their own hands, make black ♳ white as Snow, fix it, and by the benefit thereof, do great Miracles in Medicine and Alchymy. This Art, (with Grief be it spoken) by the negligence and injury of former times, was gradually lost; which notwithstanding, from the Caves of Silence, and, as it were, lying in Darkness, this my Small Treatise will again bring to Light.

The prophet *David* seems to have some knowledge of this Royal Art; for when he saw his Sins before GOD, had (as it were) contracted the blackness of a Coal, he thus implores the Divine Mercy: *Sprinkle me, O LORD, with Hyssop, that I may be white: for, by thy well-washing of me, I shall become whiter than Snow*. Whence it is sufficiently manifest, that *David* craved not the well known Kitchin-Herb, *Hyssop*, to be washed with, because that could not help him; but he spake Metaphorically, and requested that his Sins (by the great blackness of which, he believed his Soul to be infected before GOD) might be pardoned,

and he received into Divine Favour, and never be driven from the face of GOD to Eternity.

Likewise, there is no Community between the black, gross, and combustible ♆ of Wood, and the pure, fixed and incombustible ♆ of Gold: For as long as black ♆ keeps its combustible disposition, it is refused by the other, as abhorring the familiar Society of so stinking and sordid a Guest. But as soon as that *Ethiopian*, by assistance of the most noble *Hyssopaick Art*, shall be washed white as Snow, and rendred constant in Fire, then it is readily received into Communion by the ☉, and of both is made one Tincture, by help of which, other Metals are reduced to the Perfection of Gold; as a little after shall be shewed more at large. Yet I will first briefly note the difference of ♆, according to my Experience; which is indeed not very necessary, because *Paracelsus* hath done it. Nevertheless, I am very willing to subjoyn these few things.

Ancient Philosophers, as often as they in their Writings treated of the Original and Beginning of Metals, placed the Foundation of their Assertion in *Demogorgon*; *viz.* That he was the Grand-father of all Metals and Minerals, who, dwelling in the Center of the Earth, was cloathed with a bright-red Cloak. But properly, *Demogorgon* is the Central Fire continually burning, and a Subtile Spirit of ♆, distilling it self through the passages of the Earth. If this firey Spirit in its ascent finds a Commodious Cavern, or Humid Place, in which it may abide; it is immediately there coagulated into a Mercurial Water, and by the Central Fire's continual Coction, in length of time, ripened into Metals and Minerals. But the ascending Spirit of ♆, which finds no Seat for its Abode, ascends higher and higher, until it comes to the

Superficies of the Earth; into which, when moystened with Rain, it thrusts it self; and from the Ground grows upward into the Air, in the form of vast Bushes and Trees; in which Plants and green Trees, is found such a ♆ as is in Minerals, (yet this is not found so fixed, as that in Metals,) because all things in the Bowels of the Earth are generated according to the Influence of the Stars, and there coagulated according to the nature of the place into these or those Metals. Let him, who is desirous to be taught more at large touching these, consult those Philosophers, by whom the same are plainly enough described. If the pleasure of Operating induce any one to set about this Work, he may make choice of the ♆ he judgeth most sutable to his Intention.

Now behold the Method, in which, by the benefit of the most ancient *Hyssopaick Art*, black ♆ is by a dexterous washing turned into white, rendred fixed and constant in Fire, and by Reverberation transmuted into Redness, and thenceforth used as a Medicine of Humane and Metallick Bodies wanting melioration, and that with notable profit.

Here is presented, first, the Method of Washing Black Sulphur *so, as it becomes very White.*

The worthy *Paracelsus* doth briefly indeed describe the method of whitening and rubifying ♆, but what was most conducent thereunto, he concealed; *viz.* that way of Preparation, without which no *Aqua Fortis* can have ingress for Washing and Fixing. My purpose is in this place, for the sake of the Searchers of Art, to publish this Secret in plain Words. This may be done many ways, as will appear by the following,

℞. One part of the Terrestrial Sulphur of Pit-coals,

or of the Vegetable Sulphur of Wood-coals; with which, reduced to Powder, mix two or three parts of our *Sal Mirabile*, prepared of Oyl of Vitriol and Common Salt. Which mixture put into a Crucible, and set the Crucible covered in a Wind-Furnace for melting. There the *Sal Mirabile*, by its Acrimony, preys upon the ♃, and dissolves it; and thence makes a *Red Stone*, which, by pouring Water on, you may dissolve, Filtre, and again Coagulate, into a Red Salt or Stone. And thus the ♃, by help of the *Sal Mirabile*, through one only abstraction of a sharp *Aqua Fortis*, will be so habile, as it may easily be made white with washing, and also be fixed so, as to sustain the force of Fire, according to this following.

Process.

℞. Of this Red Sulphureous Salt, ℔ j. and upon it, in a strong Body of Glass, pour ℔ iij. of most sharp *Aqua Fortis*: Yet not all at once, but leisurely, and at times; because the *Sal Mirabile* with the ♃ loseth its Acidity, and becomes Alcalisate, and therefore so inimical to the *Aqua Fortis*, as it impetuously resists the same. Therefore let him, that is ignorant of this, be very wary, lest all that is contained in the Vessel fly away, or the Glass, through too much heat, burst in sunder. For this cause, proceed leisurely, and operate according to the Rules of Art, that your Endeavour may be fortunate. For, in a way contrary to this, you can find nothing, but Damage and Trouble. As often as you put in any *Aqua Fortis*, presently put on the Head, because it will suddenly and hastily fume, and so cause damage; to prevent which, after I had sustained several Losses, I at length, against such Exhalations, found this Remedy.

In the Top of the Alembick I caused a small hole to

be made, through which I put a little Tunnel of Glass, and luted it on. So soon as I had put the prepared ♄ into the Body, and luted the Head and Receiver to it aptly, I through* ***Half Ounces.*** that little Tunnel poured at one time two or three Lo tones of *Aqua Fortis*, and presently stopped the Pipe with Paper; then immediately after great Ebullition, (by its own Virtue, without any external Fire) the subtil Soul of ♄ ascended in a red form. Soon after, I poured on more *Aqua Fortis*, and left it to its own operation. This I did so long, and so often, as until I had put in ℔ iij. of *Aqua Fortis*, upon ℔ j. of the prepared ♄. When you have thus done, you may administer Fire externally to your Matter in the Glass Body placed in Sand, for so the *Aqua Fortis* will the more virtually act upon the ♄, and will all ascend red in Colour; but the ♄ will remain with the *Sal Mirabile* in the bottom of the Vessel fixed, white, and able to sustain the force of Fire so, as it seems almost incredible, that such a Substance, easie to be enflamed and burnt, should in a few hours space be exalted to so great Fixation and Constancy. The Distillation ended, and Glasses cooled, take up the Body out of the Sand, and thence take out the Salt with the fixed ♄; and to dissolve the *Sal Mirabile* from it, pour on as much Common Water as shall be sufficient. After extraction of the Salt, the fixed white ♄ must be dryed, and kept sufficiently hot in a Crucible in an open Fire, until the ♄ remains fixed, totally white, and able to abide the Examen of Fire. Then is it fit to be reserved for such Uses, as you shall learn by the following.

Note: If the *Sal Mirabile*, together with the *Aqua Fortis*, shall be purified, then the fixed ♄, after Edulcoration, will be white as Snow. But on the contrary, if you do not well filtre the ♄ with the *Sal*

Mirabile, and also cleanse not the *Aqua Fortis*, the ♄ will not come forth of a Snow-like Colour, as you may easily conjecture. Wherefore, whosoever would have a Snow-white ♄, he must warily proceed, and purely operate, in all parts of his Work. In Medicine, and the Transmutation of Metals, ♄ destitute of whiteness, will serve well enough; but if you would apply it to such Uses, as necessarily require a Snow-white Colour, you had need to proceed warily, according to the Prescripts of Art. For it is of great Concern in every Work, to know, whether the fixed ♄ should have a White or an Ash Colour; as in the following shall be shewed more at large.

Moreover, it is highly necessary to be known, that that *Aqua Fortis*, which was poured upon the prepared ♄, and separated from it by Distillation, is no more to be reputed Common *Aqua Fortis*. For although it ascends Red, yet that Redness disappears in a day or two, and the *Aqua Fortis* shews it self limpid and clear again; in so much, as it can scarcely be thought by any Man, that any eminent Virtue is latent in that red *Aqua Fortis* changing again into whiteness. Which kind of Ignorance did notably hurt me, whilst I persuaded my self, that such an *Aqua Fortis* could not be effectual for any other use, or for the same, again. But afterward, when I was seized with a desire of searching, whence that Redness should proceed, and why it again disappeared; I rectified a pound of such *Aqua Fortis*, in a clean Glass Body, to know, whether that Redness would remain behind, and no other than the *Aqua Fortis* simple ascend; and, by tryal, I found, that no Redness would ascend, but in that Rectification it separated it self from the *Aqua Fortis*, and resided in the bottom in the form of Powder, white as Snow. Having done this, I tryed, whether the same White Powder were

fixed, and I found it to be as fixed, as Gold it self: yet had no ingress into Metals, but remained like a white Earth constant in Fire. Hence I was seized with the delight of thinking, what eminent Virtue might be latent in this Snow-like Powder. Wherefore I again and again made like Tryals, and still found the same. Whence a great Light discovered it self to me, by which I perceived, that in the vehement Action of the *Aqua Fortis*, in dissolving the prepared ♃, the most clean Soul of the ♃ ascended with the *Aqua Fortis*, yet in a very small quantity: For out of ℔ j. of such ♃, I had not above eight or ten Grains of this Soul of ♃ left behind. Which thing, at first, did not please me very well, because the smalness of its weight seemed of no value with me. But having made a more exact Tryal, I found this Snow-like Powder to be a most excellent Medicine in several Curable Diseases of the Humane Body, and a true Tincture for Correcting Metals; and therefore afterward I esteemed it far more than before; and this so noble white Tincture, I, by the help of Art, united with Gold, (which is a thing not difficult to be done by a skilful man) and so found, that this laudable Tincture, although so very white, might, with ☉, in a small Fire, be exalted unto Redness, and be of more value than all the ♃ remaining; although that is an hundred-fold more ponderous, than this that ascended. Yet the Use and Fruit of Both, we will a little after shew more at large.

These may suffice to be offered here, touching the way of Whitening, Exalting and Fixing, common, black, filthy, fugitive, and combustible Sulphur, till it is able to sustain the torture of Fire. But before we proceed to the Use of this whitened and fixed ♃, we will here shew certain other ways of whitening and fixing every combustible Sulphur.

Another way of Fixing Sulphur.

℞. One, two, or three ℔. of common yellow ♃ reduced to Powder; upon this, in a glazed Earthen Pot, pour four, six, or nine ℔. of a strong *Lixivium*, made of Lime or Wood-Ashes, in which, you must so long boyl the ♃ with continual stirring of it, as until the *Lixivium* hath dissolved as much of the ♃, as is possible. Then decant it off, and pour on fresh *Lixivium*, that the same may also dissolve as much as it can; repeating the same Labour till all the ♃ shall be dissolved. Which Solutions, if you filtre and coagulate into a Red Stone or Salt, the Sulphur will be so habile, as it may, by the help of *Aqua Fortis*, be washed and fixed.

Another way of Fixing Sulphur.

Dissolve ♃ in a *Lixivium*, and put that Solution in a Glass Body, upon which set an Alembick, with an hole on the Top to put a Tunnel through, as before said, and adjoyn and lute a Receiver thereto. Then through the Funnel pour in leisurely and by degrees so much Oyl of Vitriol, as until the mortification of both is perceived, no more ebullition is caused, but all action each upon other ceaseth. This being done, administer Fire by degrees, and a subtile Spirit of Vitriol will ascend, which performs wonders in *Medicine* and *Alchymy*; because it contains Spiritual ☉ in it self, and may be very much subtilized by Rectification. In Taste, it differs little from the Taste of Spirit of Urine; only that it is more grateful to the Palate, and for every Use more efficacious than Spirit of *Sal Armoniack* or *Urine*: Also from it the Tincture may be separated, as we will shew here following.

The Salt, remaining in the bottom of the Glass, must be taken out, and by fusion in a Crucible turned

into a Red Stone, which suffers it self, *per se*, to be fixed in the Crucible in a short time. By the benefit of this Sulphur, all Metals may particularly be amended with great profit. If any one purposeth to use the same Universally, let him pulverize this fixed Red ♆, and from it extract a blood-red Tincture with Spirit of Wine: For this Tincture is easily extracted, and by *Paracelsus* is called, *The Element of Fire*, and was by him highly esteemed. Undoubtedly the chief Reason why this Philosopher called it *The Element of Fire*, was, because in the Operation he visibly discerned four Elements. For, the Extraction ended, (which may be absolved in 24 Hours) on the top is a beautiful Red Ruby-like Tincture, under which is a white Liquor, and in the bottom an Ash-like Earth. The little Skin separating the Tincture from the white Water, is taken for the Air. Therefore this way alternately, the four Elements present themselves to sight in the Glass without confusion; so as although you shake them together an hundred times in an hour, yet they will never be mixed, but after that agitation, every of them recovers its pristine Station. The fruitful Use of this *Element of Fire*, shall be further spoken of afterward.

Note: As we have here now taught the way of washing and fixing common Yellow ♆, and the black ♆ of Pit-coals and Wood; even so may the ♆ of *Antimony*, *Vitriol*, *Auripigment*, and other Minerals, be whitened and fixed.

But the method, by which ♆ is extracted from Metals and Stones, shall (GOD willing) be shewed in a peculiar Chapter. In the mean while, here is declared,

The Use of our Fixed Sulphur*, and, first, in Medicine.*

First, this ♄ whitened by Lotions and fixed, is a most excellent *Bezoardick*, and much more safe in its Use, than the Oriental *Bezoar*, which is sold indeed for a greater price, yet never discovers any visible and sensible Effect. On the contrary, our *Bezoar* deservedly is preferred before it, especially in the Pestilence, and all other Diseases, where Sweating is needful.

Also, in all Affects of the Lungs, it yields more Comfort and Relief, than all other Medicaments, which are prepared of ♄ not cocted nor fixed, but only crude. Likewise, to Men or every Age, whose weak Stomachs are prostrated by an heap of aqueous and viscous Humors, it is a present Remedy; because by its dryness it totally absumes all Phlegmatick superfluous Humidities, and perfectly restores the Stomach. What shall I say? It may in a special manner be commended, as a Cordial and excellent Confortative against the imbecillity of Age. And outwardly, it may serve for a most excellent Cosmetick; and, in like manner, by the Spagyrick Art, be reduced into an admirable sweet Oyl, by the benefit of which, the yellow and blackish Skin of Women may be tinged with a beautiful white Colour: Not like any other vulgar Cosmetick, which doth indeed whiten the Skin, but that may again be washed off with Water; not so, I say, but in such a manner, as the Skin, thus elegantly tinged, can in no wise be washed off again. Yet in length of time, that whiteness of the Tincture will wear away, and the Skin recover its native blackish Yellowness: Wherefore it must be tinged again, as often as shall be needful. Whence it is manifest, that such a Tincture is admirably useful in beautifying rich Virgins, and curious Matrons.

Moreover, this Oyl of Talk is efficaciously prevalent in curing such Affects of the Skin, as are called, *Impetigo's*, *Serpigo's*, and *Lichene's*; also Scrophulous Tumors rising about the Nose, or in any part of the Face, and proceeding from an Inflammation of the Liver. This Oyl takes away all such cutaneous Vices, and beautifies and heals the deformed Skin, restoring it to its native Colour.

The Use of the same in Chymistry.

Fixed ♃, as well in the humid, as in the dry way, transmutes imperfect Metals into ☉ and ☽. Most readily ♄ and ♀, in the humid way; and most easily ♂ and ♃, in the dry way. From every ☽ it separates ☉ by fermentation. If it be added to prepared Metals, the same Metals distilled by Retort give forth from themselves living Mercury, which permits it self to be fixed with ☉ into a tinging Stone. Whensoever old *Demogorgon*, or the Grandfather of Metals, through his extream Age, decays in strength, and waxeth bald, he devours his youngest Son, whereby he is so greatly comforted, as he is able to give to all his Sons and Servants golden Crowns.

Note: You are to understand the devouring of the Son to be, when old fixed ♃ swallows and devours crude and not fixed ♃, and thereby acquires to it self Flux and Ingress, by the help of a certain Minister, who most diligently watcheth his Sepulchre so long, as until Father and Son (or the fixed and fusible) be mortified, and rise together renovated.

Also from our Hoary headed *Demogorgon*, of exact Age, by the addition of other Matters, is made a most white* **Amill.** **Amausum*, in the acquisition of which, *Goldsmiths* do greatly delight; because they can adorn

their Artifices therewith.

Behold I present you the way of Opening and Constituting a perpetual Metallurgy of ☉ and ☽.

We above taught, that ♆ (after it is washed into a Snowy whiteness, and also so fixed, as it is able to sustain the Examen of Fire) was endued with power of amending all Metals. For the whitened ♆, by Gradation, turns them into ☽, and the Rubifyed into ☉. But here a great Obstacle is wont to intervene, so as this Work of so great profit, cannot easily obtain its Effect, answerable to the Wish of every operating Chymist; *viz.* because by Fixation the ♆ is so totally deprived of its Fatness, penetrating Power, and easy Flux, as it degenerates (as it were) into a dead Earth, which, *per se*, alone loves not to enter into any Metal, but chooseth first to have Ingress duly prepared for it by the help of other Fusibles, such are vulgar, immature, and combustible Sulphur, or Antimony; which do indeed penetrate the dead ♆, and render it so fusible, as it is capable of Ingress into Metals.

But since such combustible ♆ or ♁, is so very noxious to Metals, as it makes them black, volatile, and brittle, and so commonly doth as much hurt as good; therefore we, not approving of such an Ingress, endeavoured to find out a better. Indeed, although every ♆ may another way be so fixed, and rubifyed, without the help of *Aqua Fortis*, as to retain its own Ingress; yet such a fixation (though easily done, and requires little Charge) cannot be compleated without a very long time. I intend to describe this way of Fixing; but first shall be shewed the method of procuring a safe Ingress to this fixed ♆ by a whitening *Aqua Fortis*.

First, we taught, the ♆ was to be reduced by our

Sal Mirabile, then that a most sharp *Aqua Fortis* was to be abstracted from it, and after Abstraction the *Sal Mirabile* to be separated from the white fixed ♆ by common Water, that the ♆ might be dulcifyed and rendred fit for Medicinal Uses. Now I teach, that the ♆ fixed by *Aqua Fortis* is not to be edulcorated, but the *Sal Mirabile* to be left with it; being that, which prepares Flux and Ingress for its penetration into Metals, insomuch as Necessity now urgeth us to seek a better Ingress, *viz.* this way;

The way of adding to Fixed ♆ a Ferment, by the benefit of which, is acquired Ingress into Metals, penetrative, and amending the same.

Above, where we treated of the way of fixing Sulphur, we taught, that after it was reduced by *Sal Mirabile*, a most sharp *Aqua Fortis* was to be poured upon it, and thence to be abstracted, and that in the time of Abstraction, a little Volatile ♆ would also ascend with the *Aqua Fortis*, whence the *Aqua Fortis* waxed Red, and that such a Redness might be separated from the *Aqua Fortis*, in form of a fixed Powder white as Snow, which might be used in *Medicine* and *Alchymy* with great profit. Yea, such a fixed ♆ white as Snow, doth not only serve for an admirable Cosmetick; but also this small Quantity of ♆ deserves to be highly commended by Physicians, as a most excellent *Diaphoretick*, the like of which you can no where find. For indeed, Oriental *Bezoar* is not comparable to this of ours. Our *Bezoar* is the true Unicorn's Horn of the ancient Philosophers. This our Philosophick Unicorn, is that most potent, hoary, and aged, King of the World, who, as soon as he hath devoured his young Son, encreaseth in strength so admirably, as he transforms his Gray Hairs into Red, and triumphs in his being able to give to all his

Servants golden Crowns, and also to make them Kings. For he is no more such as he was, *viz. Venom*, or *Black* blacker than *Black*, or a wild and horrible *Beast* in the *Wood*, but is changed into our Oriental *Bezoar*, *White* whiter than *White*, Universal *Treacle*, *&c.* So great a power doth he possess, after he hath been prepared according to the Method above prescribed.

If any one be desirous to exalt the Faculties of this ♃, he will not lose his Labour, if before fixation he dissolve ☉ in *Aqua Regis*, and pour this Solution of ☉ upon the ♃, instead of another *Aqua Fortis*; and abstract it from thence again. For so doing, not only the ☉ remains fixed with the ♃, and gives Ingress unto it; but also the *Aqua Regis*, or Spirit and Salt of the World, with the Snow-like Soul of ♃, will carry with themselves over the Helm the clean Soul of ☉, and so produce a far more excellent Medicine, than if only the Soul of ♃ did ascend alone; as every Man may easily conjecture. But if any one is desirous to operate better, he may, if he will, dissolve the Gold also in a Crucible, together with the Sulphureous *Sal Mirabile*; and presently after abstract from it a most sharp *Aqua Fortis*; which way the ☉ is so much the better united with the ♃. Although I could discover much more touching this way of Operating, yet since (because I have published already as much as is fit) no Necessity obligeth me to such a publication, I will forbear to speak further hereabout.

The way of bringing this fixed Snow-like ♃ to Redness, the Laudable *Paracelsus* here teacheth; *viz.* that it must be made Red by a flaming Fire. Yet it must not be covered (as he mentions) but open: For this way it will wax Red, otherwise it would remain White. Now that ♃ to which you add ☉, needs no

Reverberation; because by the ☉ it is turned into a purple Colour, and the ☉ it self, by help of the fixed ♄, becomes irreducible, and passeth into Tincture, and so needs no further Exaltation. Therefore to whomsoever GOD shall be so propitious, as to give him this Salt of Metals, together with the knowledge of conjoyning it with the Red Soul of ♄ and ☉ which ascends, he will shew himself both in *Medicine* and *Chymistry* a principal Master: But whosoever is so blind, ignorant, and witless, as he cannot discern what I have here so largely treated of, such a Man assuredly labours with an uncurable Blindness, so as you cannot recover his Health, although you should put double Spectacles on his Nose. Now to describe the method of fixing ♄ so, as it may retain its Ingress, wherewith to penetrate into Metals, I purpose not in this place; but it shall (GOD willing) be described, where we treat of our Secret *Sal Armoniack*. Here follows,

The way of Preparing a perpetual Metallurgy of ☉ and ☽, by the help of Fixed Sulphur.

Let the Benevolent Reader know, I do not affirm, that all whatsoever I shall here write touching the perpetual Metallurgy, I my self have tryed, or took care to see elaborated. For the fixation of ♄ hath not been known to me above two or three Years, during which time, I have been for the most part distempered in my Body so far, as I had scarcely strength enough to prosecute my more secret *Arcanum's*, which are far more dear to me, than any fixed ♄ can be. Yet, in the mean while, I could not choose but employ my Thoughts upon such a Method, which being found, any one might, by the help of fixed ♄, reap a gainful Crop of Fruit from the transmutation of Metals.

To accomplish this, I could find no way more easy, than for a Man, of Elixiviat Ashes (not of Bones, but) of Wood, well sifted, to make large *Cineritiums* or Tests, in Iron Molds fit for the purpose, and with that Wood-Ash, mix a small part of the fixed ♃; and then take care to cupellate Silver mixt with Copper, (with the due addition of Lead) according to the common method of Art, upon such Tests. For thus, the ☽ will be purifyed, and the ♀ and ♄ pass into the Test, as is otherwise wont to happen in all other purifyings of Silver. These Tests, (which you may keep by you, until you have a sufficient Quantity) in the usual manner put into a melting Fornace, that in a strong Fire the ♀ and ♄, which passed into the Test, may co-unite with the fixed ♃, and so attract it to themselves, as they may come forth impregnated with ☽ and ☉. Now if this Coppery ♄ be cupellated on such a Test prepared with ♃, the ☉ and ☽ will remain upon the Test, and the ♄ and ♀, as happened before, will pass into the Test. And if you again proceed with them as before, infallibly (by such a way of Cupellating) you will, with the help of fixed ♃, from ♄ and ♀ acquire gradually a Quantity of ☉ and ☽ not to be contemned. By this way of Operating, in all those Regions, where Coals are cheap, a Man may get a competent Livelyhood. For although in Cupellating there is some loss of the ♄ and ♀, they turning into *Scoria's*; yet this small loss, in these poor Metals, is nothing, in comparison of the great Gain, which may be expected from the more Rich. I reckon, this Operation of Cupellating costs no more than the price of the Coals; for the damage made in ♄ and ♀ is richly recompensed by the ☉ and ☽ acquired. I was willing to communicate this to the *Lovers of Art*. Therefore, if there be any Curious Refiners, to whom this Process is pleasing, let them

put it to the Tryal; if they will not, 'tis all one to me: For I will make no Tryal in such Works, as require a Man strong and patient to labour in the Fire. In the mean while, I doubt not, but there will be some, who will amply encrease their Fortunes thereby; upon whose Endeavours, I pray for the Divine Blessing, and offer to their Consideration this ancient Proverb, *By Saturn and Mars, by Fire and Art, a Treasure is found*. *Mars* is fixed *Sulphur*: Much might be said for *Saturn* also; but that is not so conducent as fixed ♄, which is much purer than rude Iron, as Experience teacheth.

Touching the further use of fixed ♄ in the Emendation of Metals, and that in an humid way, by fixing and graduating *Aqua Fortis's*, the Acrimony or Corrosive Power of which, is first so broken by the help of fixed ♄, as they do not dissolve, but only penetrate them, and deduce them to an higher degree, and, according to the nature of the ♄, tinge the same into whiteness or redness.

It is known to us, that nothing tingeth but ♄ only; and that, according to its Nature, into redness or whiteness, both in the humid and dry way. In the dry way, the ♄ must of necessity be so fixed and fusible, as being cast upon the Metal in flux, it may penetrate into it, as Oyl into a dry Skin. You have already heard, that in fixation by *Aqua Fortis*, from the ♄ is so taken away its Ingress, easy Fusion and Metallick Fatness, as it rather seemeth like a dry Earth, than a Metallick Substance; in so much, as unto it cannot be procured a ready Ingress into Metals, unless by some singular Art and Industry. Such an Ingress cannot be given to fixed ♄ in a better way, than by Mercurial mundifyed Metals, *viz.* by ☉ and ☽, and indeed ☉ unto Redness, but ☽ unto Whiteness. It you would

proceed more dexterously, you must legitimately unite fixed ♁ with the Salt of Metals; then will be acquired Ingress into all Metals, as hereafter in the Description of the *Salt of Philosophers* shall be seen. But if Fortune shall so favour any Man, as he can find out such a Water, as is endued with the power of dissolving fixed ♁, he will enjoy so potent a Gradatory Water, as will convert black Leprous ♄ into most white pure ☽: And not only ♄, but also ♃, ♀, and ♂; yet ♄ most readily. Touching such a Gradatory Water, (as far as I have learned by Experience) thus take it: Every ♁ whitened and fixed by washing amends Metals; but how it should have and acquire Ingress into them, is not known. Therefore, as it is the part of Art and Industry to procure to fixed ♁ a dry Ingress; so also it is no less the Work of Art and Industry to convert fixed ♁ into a Water, by which, vile Metals may be exalted to a more excellent degree of Gold and Silver. Therefore, let him, who intends to convert fixed ♁ into Water, observe, that this Water must not be so strong as to dissolve Metals, but savour only of so much Acrimony as will be sufficient to penetrate them, and deduce ♁ into an humid form, *viz.* such as it is tinged with, either white or red, according as the Gradatory Water shall be made, either of red or white ♁. Whosoever well understands how to change fixed ♁ into Water, unto him will be opened a Compendious way of Graduating vile Metals into ☉ and ☽. Which Operation is, of all, the most commodious for ♄, because *Aqua Fortis* more readily preys upon, and dissolves, other Metals than ♄. For it is prejudicial to dissolve any, because in Graduation Metals are not to be dissolved, but only to be penetrated, with conservation of their forms, as they were when put in, and, without any diminution, to be transmuted

into better Metals; which in ♄ is most easy to be done. Yet any *Aqua Fortis*, although you add to it thrice so much common Water, will prey upon and dissolve ♄, ♃, ♀, and ♂, which is a thing to be studiously avoided. Into the aforesaid Gradatory Water, in which the fixed ♳ is, cast a little common Salt, then the *Aqua Fortis* becomes Enemy to the Lead, and assaults it, but indeed only to penetrate, (not to dissolve the same) and to introduce the fixed ♳. After the Lead hath lain in such Water about 14 Days, it will swell and wax white, leaving one half of it self upon the Cupel. But the longer it shall lye in the Gradatory Water, so much the more amended will it be.

If fixed ♳ could as easily be turned into Gradatory Waters, the same may easily be fixed; assuredly in the whole World there would be no one particular more desirable than this, by the help of which, great Riches might be acquired. For this same humid Graduation requires almost no trouble or labour, more than putting filed or rasped Lead for some time into the Gradatory Water, and after Gradation, to take it out and cupellate it; being such a kind of Work, as by Chymists is accounted a Childish Labour.

But to know and be able to convert fixed ♳ into a Gradatory Water, is the principal Artifice; and to participate of that, all diligence must be used by him, whosoever he be, that is desirous to reap pleasant and profitable Fruits from Chymistry. What do you desire? All things needful to be spoken, cannot clearly be explained with a Pen; yet if any one shall acquire the Salt of Metals, he may easily so far introduce fixed ♳ into Metals by that, as they shall be amended thereby. Hitherto I have plainly enough described the Fixation of ♳, and prolixly

demonstrated, how ingress may be procured to it, as well by the Humid, as by the Dry way. Wherefore, whosoever shall think himself concerned herein, let him follow these Prescripts, until he find so much Good, as the favour of GOD will grant to him. For the All of our hope depends on the blessing of GOD.

In the mean while, I am not willing to conceal from the Searcher of Art, this one only Artificial Manual Compendium, of converting ♄ easily into a Gradatory Water. We above said, *Aqua Fortis* could find no ingress for it self to the fixing of ♄, before it was procured to it by the help of *Sal Mirabile*. Therefore, since the way of preparing *Sal Mirabile* is various, and one Salt is always more constant than another; great Caution must be used, that the Sulphur be so handled and accommodated, as it may be suddenly dissolved by the sharp *Aqua Fortis*, and so not be precipitated into a white Powder. For if this be not done, it will indeed be fixed by the *Aqua Fortis*, but become very difficult to be dissolved. If it be well dissolved the first time, after Fixation it will be easily dissolved. Which is a thing worthy and profitable to be observed: For the whole hinge of Art consists here. Therefore, if any one be well Skilled in Spagyrick Labours of Fire, he will easily bring this Prescript to a good Effect; but if he be not such, he will Labour in vain, and lose his Charges; and that not without the good Pleasure of GOD, who Wills not, that every Man should be made Rich. Nevertheless, if any one, with an indefatigable study and patience of Search, shall hit the Mark, he will give thanks to GOD and to me: If not, let him impute the Error to his own unhappiness, since I have writ so openly and clearly, as no Man before me ever did. My purpose is in this place to discover one most excellent Secret; by the benefit of which, fixed ♄ may

easily be changed into a Gradatory Water, and that the following way.

Choose such ♁, as unto which Nature hath given greater Efficacy, than to the common ♁; such, I say, as is in a sort Mercurial, and in which such beginnings of the Operation of Nature discover themselves, as thence may be made a Metal of a Golden Disposition. Such a Mercurial ♁ you shall scarcely find in all the Metallurgy of Gold; and that naturally Red, both internally and externally; and is otherwise called by *Paracelsus Embryonate Sulphur*, or *Cinnabarine Sulphur*, or immature mineral *Electrum*; but by Miners vulgarly called the *Flower of Gold*: Also you may perceive it to have a great Communion and similitude with *Auripigment* and *Antimony*. This *Sulphur* is Mercurial, and toucheth Metals with a more near Affinity, than vulgar simple ♁, because after Fixation it is easie to be dissolved, and before Fixation better to be wrought upon than common ♁, which partakes of no Mercury. And this ♁ in the abstraction of *Aqua Fortis* gives forth more of a beautiful Tincture than any other common ♁. Also this pure Soul may much better be used in *Medicine* and in *Alchymy*, because it is both Mercurial and of greater Efficacy, than the Soul of any common ♁.

Note: Common ♁ is not so easily prepared for Solution, as this; because it is Mercurial, and therefore, hath more Communion with *Aqua Fortis*, to be dissolved by help of it. And after it is dissolved, in the Distillation it gives forth more Soul, and the fixed ♁, which remains in the bottom, is of greater Virtue in *Medicine*, than the other of common ♁. For by how much the more pernicious Venome it was before Fixation so much the more Efficacious *Medicine* doth it become, after the Venome is

inverted by Fixation, and converted or prepared into an Antidote or Treacle. Such ♳ may also another way, more commodious, than by *Sal Mirabile*, be prepared for easie Solution: Which indeed is a thing of great moment, and worthy to be observed.

This short, but necessary, Admonition I thought good to subjoyn for the sake of the Searchers of Art; to the end it might be known, that one ♳ is better than another for preparing the aforesaid Gradatory Water. Nevertheless, the known common *Sulphur*, as well as that of Wood, is sufficiently conducible to be washed and fixed. More at this time I have not to advise. In the mean while, if any one be desirous to Labour, he may ingeniously search out all things fit for his Invention, and earnestly strive for Riches. For I, without Envy, or close Concealment, have so openly spoke my mind, as the least blame cannot justly be imputed to me. But to prevent the Infelicity of thy Error, my Reader, I could not do better, than I have here done by Writing. Let it not be tedious to Thee to tread in our Footsteps, and in the Footsteps of others, so long, as until you can attain to a fortunate and desirable End; which will Crown your Work: Which Work, by Idleness and sloath, together with Supine Ignorance, can never be accomplished.

Having communicated these Gratis, every Man may hence satisfie his Desires so, as not to trouble me further with his Inquiries.

A COROLLARY.

We, in this small Treatise, have plainly shewed the Way or Method, by which, every black Volatile and Combustible ♳ may in the space of one day be

converted, by washing, into a Snow-like Candor, fixed and rendred constant in Fire.

Also how, in Fixation, the *Aqua Fortis*, being abstracted from the *Sulphur*, carries with it self the most pure Soul of the *Sulphur*, renders it fixed and durably permanent in Fire; and besides, that it is not only a present Remedy for expelling Diseases most grievous in the humane Body; but also, that it is endued with the Power of transmuting imperfect Metals into ☉ and ☽, yet particularly only, being destitute of such ☿, as can sufficiently extend it self in Efficacy.

Likewise we have taught, how to the more gross part of the ♃, which remains in the bottom, ingress may be procured for the amending of Metals with Profit, both in the humid and the dry way.

Lastly, we shewed, how much one ♃ excels another, and such ♃ was to be accounted more excellent which contained in it self pure ☿; and that especially to be the most excellent, which before Fixation was judged most venemous; and that for this Reason, *viz.* because every Supream Venome, after Preparation, will become the highest Medicament; and that the Melioration of such *Sulphur* is much more Efficacious, than common *Sulphur*. Wherefore in this place, I am willing, again and again, earnestly to commend to the Lovers of Art *Antimony*, Red *Arsenick*, Yellow *Auripigment*, Ash-coloured *Cobaltum*, *Cakimia* and *Zinck*, with *Bismuth*; because all these are more excellent than common *Sulphur*. But he, that elaborates such Subjects, so venemous, must studiously beware of the evil Fumes arising from them. For as such a Subject before Preparation is mere Venome, so, in preparing, its venomous Disposition is more and more increased; but after

Preparation, that which was deadly, now becomes a most Salubrious Antidote or Treacle, and present Remedy against all kinds of Poisons.

Note: Whosoever is desirous to be securely freed from all Peril, him I would advise, to learn the way of fixing some common ♁, before he rashly attempts to invade the Fort of such noxious Venoms.

Therefore, whatsoever we have hitherto taught are not vulgar Matters, or Arts well known before, but merely great *Arcanum's*, and those very lately invented. For, who could believe, that common ♁, a Substance easily inflameable and burnable, should in one day be so fixed, as to be able to remain unhurt against all the force of *Vulcan*? Who could have persuaded himself, that the most venemous Venoms, as *Cobalt*, *Arsenick* and the like, may in one day be Artificially inverted, and their mortal Venoms converted into Salubrious Antidotes? Lastly, who could ever have thought, that of the most Volatile Mineral Subjects, as ♁, *Antimony*, *Arsenick*, *Auripigment* and others of that kind, in the space of one day may be prepared a Tincture (constant in Fire) for humane and Metallick Bodies? No Man, if we had not in this small Treatise so evidently demonstrated that, as it may be plainly understood. Wherefore, as I have formerly said, so I am now ready to affirm, that I, in this small Treatise, have revealed so great and admirable *Arcanum's*, as no Man (as far as the Memory of Man can tell) hath publish'd any thing more clearly than I, touching such Secrets.

If any one is desirous to Learn, whence so swift a Fixation of combustible *Sulphur*, or so sudden *Metamorphosis* of most deadly Venoms, ariseth; to him, I will now discover the Cause. It is sufficiently

manifest, that Spirit of *Nitre*, as well as *Aqua Fortis* distilled from *Vitriol* and Salt *Nitre*, possess such a fiery Disposition, by which all combustible and Volatile Minerals are ripened. And being ripened, they are also fixed; as if fixed things must of necessity be Mature, and consequently no more noxious or deadly to Mortals. For whatsoever is rough, crude and immature, the Stomach of Man cannot digest, but rejects and casts out that, (by which it may be injured) as Venome: According as is easily discerned in all *Catharticks*, either Vegetable, Animal or Mineral, which, by reason of their Crudity, are so great an offence to the Stomach of Man, as it frees it self from them, either by Vomit or Seidge. And the more crude and immature Purgers be, the more strongly do they Operate. Hence usually (by the Prescript of Physicians) Purgers that are too violent, before they be taken into the Body, are amended by Fire. As for Example. *Squills* and *Diagridium*, which too vehemently Purge, are covered over with Dough and baked in an Oven, for correcting the excessive Purging property in them, that they may cause Evacuations more moderate and more safe. *Antimony* immoderately Purging, is excocted, or melted in an open Fire with common *Nitre* and *Tartar*, by which it is so far corrected, as it Purgeth without vehemency. The same also is so corrected by spirit of *Nitre*, as it loseth its purging Property, and instead of its Cathartick Virtue, acquires to it self a *Diaphoretick* and *Diuretick* Property.

Common *Tartar*, taken into the Body, performs the Office of a *Cathartick*: But the same, when the ripening Heat of the Sun, in the more hot Regions of the World, hath took from it, its Acidity, and it, in the Fermentation of Wine, becomes a fiery Spirit, it

no more exerciseth a purging Property, but rather hinders Purgers, and so amends them, as they cannot Purge with so great vehemence, as they were wont to manifest, before Correction; as is already demonstrated by Us, where we treat of the Extraction of purging Vegetables. Therefore if the common Fire of Coals, and Spirit of Wine, correct Vegetables and Animals immoderately purging; why should not the most strong Fire of Salt, such as *Aqua Fortis* is, correct the most venomous Mineral Subjects, and be able to transmute the same (deposing their noxious Qualities) into an Antidote or Treacle?

From all which, it is sufficiently manifest, that in correcting even the most venomous Subjects, Mineral Spirits of Salt are sufficient; being such, as can deprive them of all their pernicious Venome, and change them into salutary Medicaments. Wherefore, I doubt not, but that the ingenious Reader, by these few things demonstrated, will sufficiently understand the cause of this sudden Correction or Fixation of all Volatile and venomous Mineral Subjects. When Ancient Philosophers, by Poetical Parables, described the laborious Navigation of *Jason* to the Island *Colchos*, where resided an huge *Dragon* vomiting Fire, which, with Eyes never closed, diligently watched the Golden *Fleece*; they added this, *viz*: that *Jason* was taught by his Wife *Medea*, to cast to this waking *Dragon* an edible *Medicine* to be swallowed, whereby he should be killed and burst; and that *Jason* should presently take the *Dragon* (thus slain) and totally submerge him in the *Stygian* Lake. *Jason*, in this ingenious Fable, Hieroglyphically represents the Philosophers; *Medea*, accurate Meditations; the laborious and perillous Navigation, signifies manifold Chymical Labours; the watching *Dragon* vomiting Fire, denotes Salt *Nitre* and *Sulphur*; and the Golden

Fleece is the Tincture or Soul of *Sulphur*, by the help of which, *Jason* restored Health to his Aged Father, and acquired to himself immense Riches. By the Pills of *Medea* is understood the Preparation of *Sulphur* and *Sal Mirabile*. By the total submersion of the *Dragon* in the *Stygian* Lake, is intimated the Fixation of *Sulphur* by *Stygian* Water, that is, *Aqua Fortis*. Whence, it is sufficiently clear, how obscurely the Ancient Philosophers did describe their Fixation of 🜍 by *Nitre*, and how secretly they hid it from the Eyes of the unworthy. But, since I, in this Treatise, do as clearly as is possible discover all things, know, that I do it not without Reason. It will be enough for any one, if he rightly understand the Method of performing such a Fixation.

After any combustible 🜍 hath been fixed by *Aqua Fortis*, or *Aqua Regis*, and ☉ and ☽ added to it in Fixation, then will that no more be vulgar ☉ or ☽, being such as cannot again be dissolved in *Aqua Fortis*, or *Aqua Regis*, nor upon a Cupel have Ingress into ♄, but passeth as it were into a dry Earth, which can neither be reduced by *Borax*, nor any other common fluxing Powders into a ductile Body. If any one be desirous to know this by Experience, let him dissolve ʒβ of ☉ in *Aqua Regis*, and pour this Solution upon a Pound of *Aqua Regis*, and also put this *Aqua Regis* upon ʒiiij of Butter of *Antimony*, and abstract the *Aqua Regis* thence, Then he will find, that Gold, which was in the *Aqua Regis*, to have mixed it self Radically with the *Sulphur* and *Mercury* of *Antimony*; so as not only the Butter of *Antimony* becomes fixed and irreducible, but it also renders the Gold so irreducible, as thenceforth it can no more be separated from the *Antimony*, but remains adhering to it in every Examen: And can only be subduced by our Secret Salt of Metals, volatilized, or rendred

fusile, and so be introduced into other Metals for their Amendment.

Therefore, if such a destruction of ☉ can be made by *Antimony*, less than the half of which is ♁, but the greatest part ☿; how should the same not be better performed by common ♁, which is void of all *Mercury*? I, in all those places where I have taught the Fixation of *Sulphur*, did always advise, that *Aqua Regis* to be carefully kept, which was abstracted from the *Sulphur*; but especially what contained Gold; because together with the *Aqua Fortis*, the most pure Soul of *Gold* and *Sulphur* ascends, and is as much fixed, (I might say, more) as that which remains in the bottom. Wherefore, if what I have here imparted be observed by any Reader, or by none, it shall not trouble me, but I shall remain well contented, that I have done my Part, and performed so much, as no Man before me ever did; because I have openly taught the Method of extracting in a few hours (by the help of Distillation) from ☉ and ♁, or from ☉ and *Antimony*, a fixed Tincture. And these I do willingly communicate to the Searchers of Art.

Some write, that *Miriam* the Prophetess, and Sister of *Moses*, knew the Art of elaborating the Tincture in three days, which seems incredible to many Skilful Writers. But what will envious Persons judge, when they shall hear, that *GLAUBER*, by a publick Writing, without any manner of Concealment, hath taught the Method of extracting a fixed Tincture out of ☉ and *Antimony*, fit to expel all desperate Diseases out of the humane Body; and this work to be compleated in one day? Undoubtedly they will exclaim and say: *All are Lyes, and such things are impossible to be done*. The ignorance and wickedness of these Men were much more tolerable, if, to their Calumnies, they should

also add, *Our ignorant Brains persuade amiss*. For did they rightly know themselves they never would so basely condemn and reprove the Experience of Others. But what shall I write against such? Nothing, but the Old Proverb, *Effeminate Men, Effeminate Words*; according to the Verse,

Each Bird so sings, as formed is his Bill;
And such as is the Man, so speak he will.

Indeed I would willingly have published more Examples, of the Method of swiftly fixing *Sulphur*, but I am kept back by very weighty Reasons. Yet I cannot chuse, but Commemorate these few things thereabout; *viz.* that every ♆, without the help of external Fire, by a Secret invisible Fire only, which is added to the combustible ♆, and left with it for a small space of Time, in a cold place, becomes as white and fixed, sustaining all force of Fire, as well as that Fixation, which is made by *Aqua Fortis*, or his abstraction from the ♆. Wherefore this cold Fixation of *Sulphur*, by our Secret cold, and humid Fire (because it needs no common Fire, no Body, and Head, no Retort with its *Receiver*, and the like) is to be preferred before the other Fixation by *Aqua Fortis*. Therefore for this, we give Immortal Praises and Thanks to the most wise GOD.

If any Reader thinks, I have been too brief, or too obscure in this Treatise, he may more amply satisfie his Desires from the two following Tracts, where we treat of the *Mercury* and *Salt* of Philosophers; whereunto we refer every one, that is a studious Inquisitor of Art.

OF THE

MERCURY of Philosophers.

Mercury may easily be extracted not only from all Metals and Minerals, but also from Animals, and Vegetable Subjects, and of the same (by the help of Gold) be prepared a true Tincture for all the three Kingdoms.

We, from the Consent of all true Philosophers, do certainly know, that ☿ is the most pure part of the three Principles of Metals, and therefore doth spontaneously adhere to most pure Metals, and always embraceth them with greater affection, than the impure Metals. As for Example, *Mercury* most willingly adheres to its own like ☿; next to ☉; then to ☽; afterwards to ♃, and ♄; and lastly to ♀; but to ♂ most unwillingly, only because it chooseth rather to mix it self with its like, than with its unlike. For it is wholly Homogeneal, void of all Heterogeneal parts; such also are ☉ and ☽. The greatest part of all other Metals is Heterogeneal, although there is found no imperfect Metal, which hath not in it self some part Homogeneal; yet so, as the Metal participates more of the one, than of the other; according to the Writings of Philosophers. Wherefore, a true Philosopher will scarcely affirm, that, by the benefit of the Tincture, the whole Body of imperfect Metals can be transmuted into ☉ or ☽, since so great Virtue is not insited, even in the Philosophers Stone it self. For the immature, foul, stinking, combustible and superfluous ♠ of ♃, ♂ or ♀, cannot, in so short time, as Projection is wont to be made in, be converted into ☉, although you cast in more than enough of the Tincture: But as much as the Metal hath of Homogeneity, that is, of *Mercury*, in it self, so much only is tinged and fixed into Gold, the Residue not

so. Because the Stone separates the Heterogeneal parts, that is, the superfluous ♤ burning it self (in the form of *Scoria*) from the *Mercury*, which it only tingeth into Gold; because it hath no Communion with those Heterogeneities; as I have daily found, and in the following Part, where we treat of the *Salt* of Philosophers, I purpose to demonstrate more at large.

Now let us see the Method, by which Metallick ☿ may with little Labour be extracted, not only from

Metals and Minerals, but also from all Animals and Vegetables. I said, *With little Labour*, in respect of experienced Men. For in respect of the Unskilful, it is not a Work of small Labour; but in the Memory of all Ages it hath been accounted (by all the most experienced *Lovers* of our *Art*) the *Secret of Secrets*, and the nearest way to come to the Attainment of the true *Universal Medicine*. Nor will it ever be of less Esteem, since in the whole Nature of things, a more pure matter cannot be found, (whereof to make the Stone of Philosophers) than this only *Mercury* of Metals. In the mean while, it is easie to judge, that the *Mercuries* of Metals differ in themselves notably, and that one of them is better, and more conducible than another, for preparing thence a Tincture for Humane and Metalline Bodies. For one is always better in Colour and Tincture than another. Indeed, by the external Face, almost no Man is able certainly to know, from what Metal or Mineral the best *Mercury* may be had: Yet according to the general Opinion of Philosophers, the most excellent ☿ is wont to be prepared of the *Vitriol* of ♂ and ♀; because these two Metals do most abound with Tinctures. I, being taught by Experience, am assured, that out of black Ash-coloured ♄ may be acquired a ☿, as

excellently tinged, as from both those Red Metals, ♂ and ♀. Yet in the mean while I do not deny, that the ☿ of ♂ and ♀, is impregnated with 🜍, tinging in the highest degree; as Ancient Philosophers, in these few words, have compendiously expressed. ***VITRIOLUM.*** *Visitaris Interiora Terræ, Rectificando Invenies Occultum Lapidem, Veram Medicinam.* By which Words, *VITRIOLUM* [or *Vitriol*] is expressed; which process is no other, than a Solution of *Mars* and *Venus* prepared by the Labour of Nature. But *Vitriol* prepared thus by Nature, is never found so pure and clean, as that which is prepared of good Steel, and pure ♀, by the help of Oyl of *Sulphur*, or instead of that, Oyl of *Vitriol*: Because the Native contains more Earthiness, than that which is made by Art. Now let us return to our *Mercury*.

I think good here, to advise all the Lovers of our Art, not to bend their thoughts so much upon vulgar ☉ and ☽, as to endeavour out of them to extract their ☿ and 🜍. Because common ☉ and ☽ are altogether Homogeneal, and have nothing of Heterogeneity in them; and therefore difficult to be wrought on. And although they were as easie to be wrought on as ♂ and ♀; yet it would be no Profit to use them; because of their greater Price, and also because there is much more Tincture contained in vile and contemptible ♂, than in ☉ it self. It is true, this Tincture is not yet fixed, but is volatile, and may easily be fixed. Wherefore I advise every one to seek ☿ in ♄, and 🜍 in ♂. Upon ☉, in times past, through my Ignorance, I consumed much without any Profit, and laboured Fruitlesly, until I had consumed some Pounds of it, to find out for others a more safe Way; which if any one had shewed me, I would never have laboured in vain. But I was hard to believe, that they, who were unwilling to use common ☉ and ☽, could

prepare an apt Tincture, for tinging imperfect Metals into Gold. Yet since vulgar ☉ and ☽, do not only give easie Ingress to those Tinctures, which draw their Original from the ♃ and ☿ of Philosophers; but do also further the Fixation of volatile *Mercury*; therefore we cannot well be without them, in the Composition of the Stone of Philosophers. Let the Lovers of Art take Cognizance of these few things for their Information.

Now it is necessary to be known, by what Method the ☿ of Philosophers may most commodiously be extracted from Metals and Minerals, and by the help of ☉, be duly fixed by Art, into a Tincture for humane and metallick Bodies.

First, we are not ignorant, that the purest part of Metals, *viz.*: Homogeneal *Mercury*, is tyrannically held Captive in a certain obscure Prison, by his most inveterate Enemy, superfluous burning *Sulphur*. Therefore, if any one would unbolt his Chains, and set him free, he hath necessity to mortifie and annihilate his Enemies, by which he is so fast bound and imprisoned, before he breaks down the Prison Walls, and delivers *Mercury* from Captivity: Which ☿ will also bring forth with him his natural Brother, *viz.* tinging ♃. These being at Liberty, nothing will be wanting to fix them into a Tincture, but the help of vulgar ☉. But if any one be not satisfied with this short Paraphrase, let him read either *Sandivogius*, who hath writ an intire Treatise of such a freeing of Captives; or *Paracelsus*, who, no less eminently than plainly, hath discovered his mind touching the same.

Now follows my own Experience, Way and Method, By which I have several times freed the forementioned Captive, and set him at Liberty.

Although I have my self extracted the *Mercury* of Philosophers from Metals, by such divers Methods, as I mean here to discover; yet I always found some better than other some. Therefore out of such Processes, some of which we here subjoyn, every Man may, as best pleaseth him, take which he thinks most conducible, and proceed in Operating according to that, until he finds, what GOD shall be pleased to bestow on him.

Mercury is never to be extracted from hard Metals, before they be dissolved and unlocked. Unlocked more commodiously they cannot be, than by the Corrosive Spirits of Salt. Yet since all Corrosives are most inimical to ☿, they have no Power of making either Living or Running *Mercury*. Therefore, after Solution, the Corrosives must be mortified by contrary Salts; such are, Salt of *Tartar*, Spirit of *Urine*, *Sal Armoniack*, &c. This being done, the Corrosives changing their Nature wax gentle, and in Distillation permit the ☿ to ascend: Which otherwise, without Mortification of the Corrosive, would not happen, as you will learn by the following Processes.

Therefore, since it is most certain, that Metals are to be dissolved, before ☿ (by the help of Resusoitating Salts) can be distilled thence; we will first exhibit the Method, by which ☿ may be extracted from such Metals, as Nature presents to us already dissolved; *viz. Vitriol*, which is no other than *Mars* or *Venus*, or ♂ and ♀ together, dissolved by the Universal Acidity. Hence, whosoever will use (in his intended Work) such *Vitriol*, in which both those Metals are found highly tinged and dissolved by Nature; he will not need by tedious Labours to seek out a new Method of dissolving Metals, but may spare both his Time and Charges. Therefore, now it

will be expedient to teach, how *Mercury* may be prepared of any common *Vitriol*.

The Process follows.

Distil from common *Vitriol*, in the usual manner, an Acid Spirit, and fiery Oyl, with strong fire, according to Art. For in the Spirit is latent the ☿ of ♂ and ☿, which by Mortifying the Corrosive, may be brought to light, and made Visible, as follows.

℞. Of *Tartar*, calcined unto Whiteness ℔ i, or ij, which reduced to Powder, put into a Glass Body, on which set an Head with its Hole and Tunnel in it, well luted; then apply a Receiver, and lute the Junctures exactly. When the Body and Head is placed in warm Sand, through the Tunnel, at one time pour on about one or two *Lotones* of the sharp Spirit of *Vitriol*, upon the *Tartar* calcined; whence will be caused so great Ebullition, as by its own proper Power the Spirit will ascend from it. This Duel or Fermentation being ended, again pour in some Ounces of that Spirit; which also leave, till all the Ebullition ceaseth. Afterward reiterate the like injection, until that Acidity contends no more with the *Tartar*: Which will be an Argument, that the Salt of *Tartar* is sufficiently mortified. When you see this, administer Fire, and by Degrees draw forth all Humidities, untill the Vessel and Matter is Red hot. The Water that ascended (which in Taste will be almost like Spirit of *Urine*) must be rectified; in which Rectification the ☿ of the *Vitriol* ascending, is rendred more subtile and more pure. This pure *Mercurial* Water bears in it self invisibly contained, a living Metallick *Mercury*, which is made conspicuous thus,

The Conjunction of Philosophick Mercury *with Gold.*

Dissolve common ☉ in a sharp *Aqua Regis*, and separate the dissolved from the undissolved. Then leisurely, and at times, drop after drop, pour of your subtile Mercurial Water upon the Solution of ☉, so long, as until the Spirit of the *Mercury* hath no more Action upon the Solution of Gold, but ceaseth, and all the ☉ shall be precipitated from the Water. In which Precipitation, the ☉ attracts to its self the *Mercury* of the *Vitriol*, from the Mercurial Water, in such a manner, as it settles to the bottom of the Vessel, in the form of Slime, or a yellow Powder. Let the Precipitate be filtred through brown Paper, that the *Saline* Water may pass through; and the precipitate ☿ remain in the Filter mixt with the Gold; which must be very well washed with sweet Water, and, being edulcorated, dryed. This being done, you will have the ☿ of *Vitriol* united with the ☉: Both which will suffer themselves to be fixed into a true Tincture, for Humane and Metallick Bodies, as follows.

The Fixation of Mercury *with Gold.*

Note: Before the *Mercury* is put in to be fixed with the Gold, it must be proved, whether it be duly prepared, or not. For if the Mercurial Water was rightly prepared, it will contribute *Mercury* enough to the Gold; by which ☿ the precipitated Gold is so augmented, as tis no more common ☉. But if the Mercurial Water was not legitimately prepared, and consequently could not contribute much ☿ to the ☉, the Gold will remain poor, and, as soon as it is sensible of any heat, will fulminate, like any other fulminating Gold, and so be altogether unfit for Fixation, being destitute of a tinging ☿, which should

have converted the whole Body of ☉ into Tincture. Wherefore, after Precipitation of the ☉ and ☿, you must make a small part of the Precipitate hot, in a very small Crucible, for Tryal, whether it be fit to be fixed. For if it fulminates, like fulminating ☉, it is a sign your Mercurial Water was not perfect, and could not give unto the Gold ☿ enough. But if after it shall be Red hot in the Fire, it comes forth with a delicate purple Colour; it is to be supposed, the ☉ hath imbibed ☿ enough, and they both be fixed together into one Tincture.

Note: Beware of too strong a Fire. For this way the *Mercury* will leave the Gold untouched, and fly away; so as, thence you can have no certain Tryal. Therefore, in all parts of the Work proceed Warily and Prudently. The Fixation of ☿ with ☉ is thus made:

The Fixation of the Mercury *of* ♂ *and* ♀, *into one Tincture.*

℞. So much as you have ready prepared of this our *Mercury* impregnated with Gold, although there be no more of it, than half a *Loton*: For here no great quantity is desired. Put it into a small Glass Phial, which place in hot Sand; yet take heed, you give no stronger Fire, than your Volatile Bird can bear. This Fire you must continue in a moderate degree for some Weeks: For by that means, your *Mercury* will by little and little, be able to brook the Fire, adhere to the Gold, and convert the same into Tincture. But if any one, contrary to the serious Interdiction of all Philosophers, make too much haste, and persuade himself, he may in a shorter space of time acquire the Tincture; his *Mercury* will fly away, and leave the Gold pale behind it; because the ☿ in its flight

substracts the Colour of the ☉, and carries it away with it self. Therefore, in Fixing there is need of Patience. Hence all Philosophers advise, not to be hasty. For Festination proceeds from the Devil. Wherefore, let every one so far study his own Good, as to be obedient to this Admonition.

Note: There are also other ways, or Methods, of fixing ☿ with ☉; but he doth very foolishly, who, when no necessity urgeth, will prostrate all things together and at once, at the feet of Swine. Whomsoever GOD will be pleased to assist, he may triumph in the highest help; but whom GOD doth not assist, even the most plainly prescribed Method cannot help him. For all our help depends on the divine Blessing.

How to prove, whether Mercury *be Legitimately prepared, and whether it can give forth the Tincture of Metals.*

℞. Of the Mercurial Water above described, and mortifie it by a contrary Acidity, as Oyl of *Vitriol*, or Spirit of *Salt*. Then the *Mercury* will precipitate it self, in the form of an Ash-coloured Powder, which if you edulcorate, and grind with Oyl of *Tartar*, you will vivifie. If any one be minded, he may also distil the same by Retort, and so examine it.

A Tryal, or Proof, whether the Mercury *of Metals be so well prepared, as of it with ☉ may be made a Tincture.*

℞. A little of that, *viz.* the quantity of a Pea, and put it upon a Silver Plate, then over the Fire permit the *Mercury* to be evaporated. If it tinge the Silver well with a purple Colour, it is fit for the Work, otherwise it will be of no Value. Also, this ☿ may be

digested with the filings of ☉, in a due measure or proportion mixed, and so fixed. But this Fixation, as well as the former, require along time, and so much Patience, as all Festination must be laid aside. Whosoever is so covetous, as he cannot wait till the Fruits are Ripe; he would be better advised, if he abstained from so great a Work, than to set about it to his own Damage. I have often prepared this *Mercury*, and put it to be fixed; but because I could not look to it my self with my own Eyes, I was constrained to commit the Governance of the Fire, to the Industry of another, and then it succeeded unhappily. And when by reason of my Age, and imbecillity of Body, I was wholly uncapable to take in hand a Work of so great moment, I communicated the Method to some of my intimate Friends, with this Condition, *viz.* that they should elaborate it themselves. But because in that Operation, they could not acquire so much ☿ as they desired, they desisted, and would not proceed to the Compleatment of the Work. Hence I was moved rather, by Printing, to divulge so Royal a Work, than to let it be buried with me: Although I was difficultly brought to an hearty Assent, to yeild to the Revelation of *Arcanum's*, of so great moment, to this Malignant and unfaithful World.

The way of Preparing a tinging Mercury *out of* Antimony.

℞. Of *Antimony*, *Saltpeter*, and *Tartar*, of each ℔ j. Which, first pulverized and mixed, put into a Crucible, and kindle the Mixture with a Coal; when the Fulmination ceaseth, melt it, and pour it out into a Cone. After it is cooled, separate the *Regulus* from the *Scoria*'s; which reduce to Powder, and dissolve by boyling in Water. So doing, you will have a Red

Lixivium; upon which if you add (about half its own weight of) *Salarmoniack* pulverized, and put the Mixture into a Glass Body, (which must not be above half full, because it riseth easily) with it's Head and Receiver well luted, and then subminister Fire for Distillation; a certain most subtile volatile Spirit will ascend, in which the ☿ of *Antimony* is latent: Which, in a Solution of ☉ may be precipitated, edulcorated, dryed, and then proved and fixed, as above we taught of the *Mercury* of *Vitriol*. *Antimony* yeilds much more ☿, than *Vitriol*; and it is also made more easily than it; and therefore to be preferred far before it; but especially, because the Ancient Philosophers did for the most part use this ☿ of *Antimony*, for preparing their Tincture.

Note: If any one desire a more excellent ☿ of *Vitriol*, than That above described by Us; he, instead of the *Lixivium* of *Antimony*, may use a *Lixivium* of *Salt* of *Tartar*, and thence extract *Mercury* by the help of Oyl of *Vitriol*; so he will have some thing more excellent, than can be made of a Common *Lixivium*.

The way of Preparing out of ♂ and ♀ a tinging Mercury*, by the help of Resuscitative Salts only, without any Corrosives.*

Among all Resuscitative Salts, *Tartar* obtains the principal place; the next to which is Salt of *Urine*, which is no other, than such a Volatile *Tartar* as passeth into this kind of Salt, from Wine, Beer, Bread and other Foods taken into the humane Body. Almost of the same kind, is the Soot of Chimneys, being the Volatile Salt of Wood. Also a like Volatile Salt you shall find in Blood, Hairs, Horns and Hoofs of Animals. Even so, almost a like *Salarmoniack* is prepared of Blood, Urine and Soot. In like manner, in

Eggshels is insited an efficacious Resuscitative Salt. These and the like Salts are endued with a Virtue converting Metals into *Mercury*, after they are dissolved. For volatile Salts are not so efficacious, as to dissolve Metals: Yet *Tartar* is endued with so great Power, as it can dissolve some Metals easie to be dissolved, as ♂, ♀ and ♄, and thence may the Mercury be extracted by Distillation; especially if a little Kitchin Salt be added, or (which is more conducent) *Salarmoniack*, to comfort it. Also instead of ♂ and ♀, common *Vitriol* only may be used; and thence *Mercury* distilled by the help of volatile Salts.

Now follows the Process.

℞. ℔ vj. Of *Vitriol*, to which, dissolved in Urine, add of *Salarmoniack* ℔ j. Crude *Tartar* ℔ ij. Salt of *Tartar* ℔ iiij. Distil from these, in a strong Glass Body, a subtile Mercurial Water; which, according to the Method prescribed, may be made Corporeal, and with Gold be fixed into a Tincture. This way of proceeding is very easie, and of little Charge; so as it will fully satisfie the desire of those, who are contented with so much only, as may be acquired by the benefit of Glass Bodies. But those, whose greedy desire cannot be satisfied with little, may distill this Mixture in a Brass or Copper *Vesica*, untill they have quantity enough to suffice them: Yet with this Caution, that they use no *Alembick*, or *Refrigeratory* made of Copper, but of Lead, or (which is better) of Tin; and that because our Mercurial Water easily corrodes the Copper, and thence contracts to it self a Greenness: But in ♄ or ♃ doth not so. But if any one refuseth to be at the Charge of a Tin *Refrigeratory*, he may use his Copper Vessels. For although the Spirit corrodes the Copper, and contracts a blewish Colour, yet this Colour in Rectifying abides in the bottom,

and the ☿ is nothing the worse. Indeed, this way a greater quantity is acquired, than needs; unless the Operator be more greedy than a Wolf. But it is not the part of a good Philosopher, to covet more than is needful. If any one be desirous to prepare an abundance of Mercurial Water, either by some such way as this, or by another certain Mixture of Salts, him we have now, as it were, led by the hand, through Processes more difficult, to proceed in these. For *Tartar* alone will be sufficient for such an Use. What seek you? The Feces of Wine burnt will do the same; so as the Lover of Art, with almost no other Trouble and Charge, may extract the *Mercury* of Metals by Resuscitative Salts.

The way of Preparing Mercury *out of Metals and Minerals, by the benefit of* Tartar *only, without any other Salts.*

℞. Filings of Steel ℔ j. *Tartar* ℔ ij. Common Water ℔ xx. If by strong boyling by *Alembick* in Sand, you distil thence all the Water; the *Tartar* in that boyling dissolves the ♂, and so will Volatilize the *Mercury* set at Liberty, in such wise, as it will ascend with the Water, like a subtile Spirit; which, (concentrated and made fit by Rectification) either by a Solution of ☉, or by some other contrary Acidity, is rendred Corporeal, according to the Method above shewed. If any one, to as much *Tartar* as he hath, take half so much *Salarmoniack*, the *Tartar* so much the more readily preys upon the ☿, also much more *Mercury* issueth thence, than by *Tartar* only.

Note: But since this way, in one Distillation, but little *Mercury* ascends, such an Operation may be performed in a large *Vesica*; yet with this Caution, *viz.* that the *Alembeck* and *Refrigeratory* be not made

of Copper, but of Tin or Lead. This way of Operating by a *Vesica* will be of great use, especially for such covetous Men, as cannot be content with few things; but always labour with the perpetual Poverty of an unsatiable Spirit; although, they more than sufficiently abound with the fulness of all desireable things. For he is only Rich, who is always content with his present Fortune.

The way of Preparing Mercury *of* Saturn*, by* Tartar *only*.

℞. One or two ℔. of the Raspings or Filings of *Saturn*, upon which pour fifteen, or twenty ℔. of strong Vinegar of Wine, and mix therewith a little pulverized *Tartar*. But the Vinegar *per se* should be impregnated with no small quantity of *Tartar*. Which *Tartar*, if you distil with the Mixture, the Phlegm in Distillation carries over with it self a subtile Mercurial Spirit; which must be separated from the Phlegm, in manner as we above taught. The Solution of ♄ will remain in the bottom. Thence also, by the help of Salt of *Tartar*, ☿ may be extracted by Retort; yet it is not so good as the other, which ascended in the form of a subtile Spirit.

The way of Preparing Mercury *of* Antimony*, by the help of* Tartar *only*.

℞. Some Pounds of strong *Antimonial* Red *Lixivium*, (made of *Antimony* duly, decrepitate and melted with *Tartar* and *Nitre*) which put into a Glass Body set in Sand, as we above taught, in treating of the Fixation of ♃: Afterward, through the Tunnel, leisurely and at times, pour upon the *Lixivium* most strong Wine Vinegar, until both (*viz.* the *Lixivium* and Vinegar) cease to Act upon each other. This being done, if by

Distillation you separate all the Humidity, the Sulphureous Spirit of *Antimony*, will ascend in the form of a subtil Spirit, smelling like *Sulphur*: Which after Rectification, either with a Solution of ☽ or ☉, becomes Corporeal, and so habile, as it may be converted into a fixed Tincture.

The Method of Distilling a tinging Mercurial Spirit from Metals another way.

We above shewed, that from Metals most firmly compact, a tinging ♃ and ☿ could not be extracted, unless the Metals be first dissolved, or mortified; and that in such Mortification, there is a Spirit so apt to be associated, as, in the very hour of Mortification, it lays hold of, and carries up with it self, the ascending Spirit, or Soul of Metals. Yet among all, pure Spirit of Wine well dephlegmated, I judge best; because in abstraction it carries over with it self the most pure ♃ and ☿ of Metals, and leaves the Gross dead Body behind in the bottom; so as, such *Mercury*, as you shall draw forth in distilling by Spirit of Wine, will be much purer, and more Virtuous in Tinging, than the other, which you distil off by common Water only; and that for this especially, *viz.* because this Spirit, which is extracted by Spirit of Wine, from more pure is rendred most pure by Rectification. Which is a thing impossible to be effected, where the Sulphureous ☿ of Metals shall ascend by the help of common Water; because then the Water only, in Rectification, is distilled off, but the ♃ remains in the bottom, in form of a Red Powder: And the other, which is sublimed by Spirit of Wine, and afterward by Rectification subtilized to an higher degree, and meliorated in its tinging Virtue, is not only in *Medicine*, but also in the Melioration of Metals, Gems, and the more ignoble pretious Stones, an

hundred fold more efficaciously conducent to tinge them to a Constancy, than the former, which, in distilling, ascends by Water only; and by Rectification cannot be exalted, or multiplyed in its Virtue, so well as the other, made by Spirit of Wine. That Sulphureous ☿, which ascends by help of Spirit of Wine, is endued with so subtil and penetrative Power, as to it in the Vessel is given such Ingress, by which Metals and Gems are tinged with a more constant and durable Red, or Yellow Colour, than can be annihilated or impaired by any Corrosive Waters, or by the violence of Fire; especially if it be distilled from apt tinging Subjects, as the *Vitriol* of ♂ and ♀, or from *Antimony*. Of which I suppose enough is now spoken.

Therefore, if any one be desirous of knowing more touching this Matter, him (for his further and more clear Information of the same) I refer to the Seventh Part of our *Spagyrick Pharmacopœa*; where he will find, we have prolixly taught, touching the extraction of Tinctures, from Red Corals, and other tinging Subjects.

The way of making good Mercury of Saturn *and* Luna.

℞. Of ♄, or ☽, ℔ j. which, dissolved in *Aqua Fortis*, precipitate with Salt-water, edulcorate the Calx with Sweet-water, and dry it. When dryed, mix with it a fourth part of our ♳ fixed unto Whiteness. Distil from the Mixture in a coated Retort its ☿ with strong Fire; which notwithstanding will not be living ☿, but, in the form of a Sublimate, will adhere to the Neck of the Retort, in weight heavy, and to the Taste of the Tongue very sharp. Indeed there will not be so great a quantity of it, as some may desire, yet it is worthy of the highest Estimation. For in a Cold Cellar it is

easily dissolved, and becomes a strong Mercurial Water, which dissolves all Metals. This Water prepared of ♄ joyns it self (with an incredible Love) with the Soul of ♂; and suffers it self to be fixed with it into Tincture; This Water prepared of ☽ readily dissolves Gold, and with it passeth into Tincture. The Reason, why, I in Distillation, mix fixed ♠ with the ♄ or ☽, is this: Since both these Subjects, precipitated, as we above mention, with Salt-water, are very fusile and penetrating, easily melt together into one, and in Distillation yeild no ☿. Nor can Sand or Earth prevent this Fluxion. Wherefore, I could find nothing more conducible, than our white fixed *Sulphur*.

The way of Preparing Mercury *of* Jupiter.

Jupiter gives forth from it self, a most excellent *Mercury*, in form of a subtil Spirit; which, above all other *Mercuries*, is most earnestly beloved and attracted by Gold. For if but a very small quantity of it be put into any Solution of Gold, it in a moment draws to it self all the Gold from the sharp *Aqua Regis*, and together with it settles to the bottom, like a purple Powder. This is the best Precipitation of ☉, when you shall extract it with *Aqua Regis* from Sand and Stones: Because, by this Precipitation, the *Aqua Regis* may be used again for extracting ☉ from Sand and Stones, as you may more amply read in our Seventh Part of the Prosperity of *Germany*, where we have plainly writ touching this kind of Extraction. But in another manner, may be prepared as powerful a Mercurial Water from all Metals, by the help of my Secret *Sal Armoniack*, which, by *Paracelsus* and *Helmont*, is called the Liquor *Alcahests* touching which, I have largely treated in the Seventh Part of my *Spagyrick Pharmacopœa*, where he who loves so great Gifts of GOD, may satisfie his Appetite to the

full.

Behold, I present thee another way, by which, without any Charge or Expense of Money, you may easily prepare as much of the Philosophick ☿, as you will.

I would not have you to suppose, I here insert this so stinking a Process, to the end you should follow this, rather than the before-mentioned; but I add this, that the common sort of Men, simple and poor, may see, that they may, by such a Method as this, suppress their Poverty, and attain to the Acquisition of so noble an universal *Medicine*, as well as any other of the great and mighty Men of the World, by their ample Fortunes.

Whosoever is but a little Skilled in *Chymistry*, well knows, that every ♃ and ☿ arise from one only Original; and that the *Sulphur* in Herbs, and also that in Animals, is of no less Virtue, than the other in Metals, Fixation only excepted. For as this in Metals is found more fixed than that in Minerals, so the Mineral ♃ is more fixed than the Animal, and Vegetable. The same is to be judged of *Mercury*. But that we may wander no further, but return again to our Purpose, and clearly prescribe the Method of *Preparing an universal Medicine, of Humane Urine and Dung*, I will very briefly discover the Process in these following Words.

℞. A good quantity of humane Dung and Urine, collected in some capacious Vessel, and (after they have stood together about a Month, and when the *Salt* shall be exactly united with the *Sulphur*, and *Mercury* by Fermentation) from thence, by an *Alembick* in *Balneo*, distil the Mercurial Sulphureous Spirit; which indeed will be very subtil, but smell

strong. Yet after Rectification, as we have taught, it may be conjoyned with a Solution of Gold, and, by moderate heat, be gradually fixed into an universal *Medicine*, for Humane and Metallick Bodies.

Note: The aforesaid Stink vanisheth so soon as the *Aqua Regis* hath Access. Wherefore, those Philosophers who have laboured in Matters of evil and strong Smells, did always speak of suffocating their venemous Dragon in *Stygian* Waters. But among all Philosophers, that ever I read, I find no Man more excellently to have writ, touching this matter, than the *Philosopher Neusementius*, in a certain small Treatise of his, intituled, *Of the Salt and Spirit of the World*; where he so explains the Table of *Hermes*, as he renders it most worthy to be Read; because he hath so very prolixly, and largely, with exquisit study and diligence, explained all things whatsoever, the laudable *Hermes*, in very few Words, left to Posterity in his *Smaragdine* Table.

A COROLLARY.

Although I have, in this small Tract, so largely and clearly treated of Preparing the *Mercury* of Philosophers, as it seems altogether needless to trouble the Reader, with a further Paraphrase; since from him, I have not concealed any Methods of manual Operation, but have so revealed all things necessary to be known, as he (who, only seeking the bare Letter of the prescribed Method, knows not how to elaborate his own intended Work) may rather be accounted a Man of a dull Capacity, than a Chymical Operator: Yet since unto all insatiable Sons of Avarice, according to this my Description, there

seems to be too small a part of *Mercury* extracted, I (for the sake of those also) will demonstrate yet another Method, by which they may obtain a larger quantity of good tinging ☿, than from Metals can be gained. But first it is required, that every one, who will exercise himself in this kind of Labour, should shew himself a diligent Operator, shunning no Pains: Know, that Vulgar *Mercury* may easily be so prepared by Art, as to be as much conducent for Tinging, as the *Mercury* of Metals. Yet they must first procure Tincture to it, by tinging Metals, as by ♂, ♀ and *Antimony*. For, of its own proper Nature, it hath no Tincture at all in it self; but it must necessarily receive the same from other Metals, (in which GOD and Nature cooperating have insited it) before it can exercise the Power and Faculty of Tinging. But which way such a Tincture may commodiously be taken, and acquired from certain Stones tinged by Nature, or from certain Metallick, and Mineral Subjects, hath been by me, in various places of my Writings, so frequently mentioned, as I judge it not necessary to Discourse further thereabout in this place. But here, I will freely expose to publick view the way of Preparing vulgar ☿ so, as it may be able to extract Tinctures from Metals, Minerals and Stones.

℞. Common *Mercury* ℔ j. Which as soon as you have dissolved in *Aqua Fortis*, mortifie the *Aqua Fortis* by pouring on Spirit of *Urine*, and when you shall by Retort, in hot Sand, have abstracted thence all the unprofitable Water, and administred a stronger Fire, the *Mercury* will sublime it self in the Neck of the Retort, white in Colour, but discovering no singular *Acrimony* upon the Tongue. Such a sublimate as this, is easily dissolved by help of common Water. This *Mercurial Water* is endued with a power of extracting Tinctures from Metals, Gems, and other more ignoble

Stones. In which very Work, even *Proserpina*, the Wife of *Pluto*, will scarce elaborate any thing more excellent: Therefore, when this ☿ hath drawn so much Blood from the *Red Lyon*, as it no longer remains White, but becomes totally Red; then indeed it hath acquired the Melioration of one higher degree; but as yet, it is able to work no Miracles in Tinging. Now, that it may be exalted to so great Perfection, as to be admirably efficacious in Transmutation; this Red *Mercury* must again be vivified, and again (as we taught above) mortified; and if this Labour be repeated seven, nine, or twelve times, it will be sufficiently impregnated with Tincture. This being done, you have nothing else to do, but to fix this tinging *Mercury* into a fusile Red Stone, which will thenceforth perform the same (yea perhaps more) in the Transmutation of Metals, than the *Mercury* of Metals it Self.

Although, I have here revealed the Melioration of common *Mercury*; yet, I am fully persuaded, no Man will readily set himself about its Preparation, nor adventure, by Tryal, to experience the truth of this. For commonly, every good thing is disesteemed, if it want external Splendor. Some years ago, I did earnestly, and highly commend to some of my most loving Friends, the Exaltation of common *Mercury*; yet no one of them took so much notice thereof, as ever to set his hand to the Work. Wherefore no Man needs to fear, that Art will be made too common, although I had published the same, described even with a *Solar Ray*. Indeed, I intended to have divulged more, touching such sublimate *Mercury*, as may be dissolved with common Water, *viz.* how many other famous Works may be performed with it, besides the Transmutation of Metals; but for brevity sake, I here desist at present: Yet after a little while, (if GOD

permit) I will elsewhere treat of the same. In the mean time, let the loving Reader kindly accept of these: For hence he may be assured of the possibility of exalting common ☿ so far, as to be equal in Virtue to the *Mercury* of Metals: In which Assertion every studious Artist may safely confide, and persuade himself, that I here give no other Testimony, than I have learned by my own Experience oftentimes.

OF THE
Salt of
PHILOSOPHERS.

How, and whence, That is Prepared, and of what use It is in Medicine *and* Chymistry.

Those our venerable Ancestors, the ancient Philosophers, have indeed copiously written many things, touching this Third Part of the Principle of Metals, *viz. Salt*: Yet so very obscurely, as it is almost impossible for a Man to learn thence, Fundamentally, any thing of moment: Yea, I might say, it hath happened to very few, to know how, to prepare the *Salt of Philosophers*, but on the contrary, six hundred have ruined themselves, and lost all their Fortunes in labouring thereabout. After, I also had, for some years together, expended great Labour and Cost, besides what I spent in acquiring both the other Principles, *viz. Sulphur* and *Mercury*, (which were understood by me, about two years since) it pleased the most wise GOD at length, also to reveal to me this most famous *Salt*. Wherefore, I could not refrain from communicating some thing of it to Posterity, for the Glory of my GOD, and for divulging his wonderous Works, not doubting, but that this my Revelation may be of great Concern, to open the Eyes of this blind World. Because, they may be helped by such a Salt, of which, so incredible Works

may be prepared, as I am now about to write, and are already sufficiently known to me.

I can unto every Man safely, surely and truly affirm, that whatsoever I here write, are not the idle Dreams of a vain Man, nor patched together out of other Books, but true and solid Experiments, which I my self, with the help of these my hands, have found out. Indeed, I do not here say, that I could give no credit at all to him, who no long time before discovered something to me, touching such *Arcanum's*; but I thought his Words intimated Paradoxes and Impossibilities; although I had read Philosophers, who writ: *He that hath the Salt of Metals, hath the Stone of Philosophers*. I also well know, that the *Salts* of *Metals*, according as they been hitherto every where fraudulently presented by *Pseudo-Chymists*, having no solid Foundation, do not indeed deserve the name of Salts; being no other, than such *Vitriols*, as by the sharp Spirits of *Salts*, are prepared of Metals; and are not at all efficacious to meliorate any of the more vile Metals. On the contrary, we certainly know, that our more true Salts do so amend all imperfect Metals, as great and gainful Fruit may be reaped thence, as by the following shall be clearly made appear. But before we write any thing of the Use, of this *Royal Salt*, it will be worth while to premise something briefly, and truly, touching the Preparation of the same.

Of the Preparation of the Salt *of* Philosophers.

Now, that I may, without any wandring Ambages, describe the Method of Preparing this Salt, which is incomparable and Royal, know in very deed, that this Salt is no other, than common (but rightly prepared) Oyl of *Vitriol*, Coagulated by white fusible

Sulphur into a sweet Salt, which impresseth not on the Tongue, the least Saline savour; but rather seems to be a Stone than Salt, although fusible, like any other liquid Salt. But how that Oyl of *Vitriol*, or Universal Acidity, may be changed into such a wonderful Stone, not Corrosive, I purpose not to divulge. It is enough for me positively to affirm, it may be done.

Whosoever desires to know more of it, let him implore the help of GOD, and peruse the Writings of Philosophers, that if he be worthy of this divine Gift, he may be helped; if he be not worthy, I cannot help him. For as I acquired that, not without praying and seeking; so also, must every other Man resolve to do: Because, no Man shall ever get more out of me, than what I here have willingly discovered for publick Good. Now follows

The incredible Virtue and Efficacy, which this wonderful Salt manifests in Preparation of Tinctures, for exalting all Metals and Minerals to the perfection of Gold.

Although it is before said, that Salt, or the Stone of Philosophers, is only prepared of Acid *Vitriol*; yet I thought it necessary also, here to publish, that Oyl of *Vitriol* may be prepared divers ways, so as one or another may prepare it this way or that way, as he pleaseth. For the common and vulgarly known Oyl of *Vitriol*, suffers it self (by the help of *Sulphur*) to be easily transmuted into a Sweet Stone: Because *Sulphur* alone is endued with Power of edulcorating all Corrosives, and of Coagulating them into such a Stone, or Salt, by the benefit of which, Wonders may be done, both in *Medicine* and *Alchymy*. Philosophers do indeed persuade us, that, out of *Vitriol*, an Oyl of

a Blood-Red-Colour may be extracted by Art, with which, White Metals may be tinged into Red: But the way of Preparing this, they described not. This is that, which is most studiously sought by the Adorers of the Chymical Art, but hath hitherto been found by very few; and therefore is generally thought, by almost all Inquisitors, to be impossible, whatsoever Philosophers have writ thereabout, and how clearly, and plainly soever described it. *Basil Valentine* doth, with *Paracelsus*, call this our Oyl of *Vitriol* tinged with a Red Colour, the Blood of the *Green Lyon*; but *Bracesus*, the Wood, or Tree of Life; *Virgil*, a Bough, or Branch, plucked by *Proserpina*'s help from the concealed Tree: Also, *Ovid* useth divers other Expressions, in the Description of this Tincture.

This Red Oyl suffers it self to be Coagulated into a Stone, not Corrosive, as well as the Common Oyl: But this Coagulate is totally Red, and the other is White only. Therefore, there is a necessity, that the difference of both be known. For of both these, what the White is able to do, the Red cannot do; and what the Red can effect, is impossible to be performed by the White. That Red Oyl tingeth white Metallick Bodies into Gold, and so tingeth white Chrystals into Gems of all kind of Colours, (according to the Operators Pleasure) as, in Elegancy, they become altogether like to the Native. But the White tingeth not, because it self wanteth Tincture, which notwithstanding may be procured to it: Yet it extracts the Tinctures from all precious, and more ignoble Stones, and by them is so tinged, as it is, thenceforth able to tinge white Metals into Gold, and white Chrystal into beautiful Stones of every Colour, and that with as excellent Splendor, as their Brother, the Ruby, enjoys. In a Word, our Salt of Metals, or Stone of Philosophers alone, and *per se*, is so great a

particular Ruler throughout the whole Kingdom of *Chymistry*, as by amending, it transmutes all imperfect Metals into Gold, and common Stones into precious: Yet unto it, is denied Ingress into Vulgar ☿. But the fixed ☿ of Metals will abundantly perform that; as is before abovementioned. Now, as touching this *Mercury*, which those imperfect Metals, *viz.* ♄ ♃ ♂ and ♀, contain in themselves, our *Sulphur* is so very fit for tinging that, as, for that purpose, there is no need of other help. Therefore it is most certain, that the Salt of Metals obtains Priority in the Chymical *Laboratory*. One thing I am freely willing to discover, *viz.* this: If any one would take away the fixed Tincture, or tinging Soul from precious Stones, as *Granates*, *Rubies*, *Saphires*, *Lazure* Stones, and other common Stones, and add to them also, a small part of pure Silver, our Magnetick Salt will extract the Tincture from the Stone, and at the same moment, in which it extracts the same, incorporate the added Silver, with the Tincture, and tinge the same into Gold: So, as it will affect a Man with admiration to see, that in one and the same Subject, should be both an attractive, and expulsive Virtue. Perhaps hence, that most ancient Philosopher *Pythagoras* drew his Opinion, for he believed such a Transmigration, and taught, that the Soul, as soon as it passed out of the mortal Body of Man, it entred into some other near adjoyning Subject, and there inhabit'd. Indeed they, that labour in Metals and Stones, do find such a Process; but with the Soul breathing out of the Body of Man, the matter is far otherwise. For here Bodies are not required, but Spirits, which at the hour of Death receive the Souls of dying Men, and convey them to Places by GOD appointed. According as the Man hath lived, either Well or Ill, so those Spirits will act at the end of Life, each according to their

Office; so as, the Souls of pious Men shall be received by Spirits of Light; but impious Souls, by the Spirits of infernal darkness. In the Mortification of Metals and Minerals, Philosophers also want not their peculiar Spirits, which receive and transport the flying Souls of Metals and Minerals. Touching which Transportation of Souls, we made some mention above, where we treated of the Fixation of Metals. * ***Transduction.*** Also * this Transduction was highly esteemed by ancient Philosophers, especially by *Neusementius*, who said: By this Power, *viz. By the Spirit and Salt of the World, we deliver the Souls of the Dead from the Prison of Hell.* Therefore, whosoever shall be well Skilled in this kind of operating, he will be able to do wonders in this Chymical Kingdom of Metals. For if you add the Spirit and Salt of the World to any Metal dissolved, and by Retort distil the Mixture, they will carry over with themselves, the most pure part of the Metal, *viz.* its tinging Soul, and leave nothing behind in Hell with *Pluto*, but the gross and unprofitable Body. Wherefore, whosoever can rightly separate that transduced tinging Spirit of Metals, from the Spirit of the World, he will absolutely be possessed of a fixed Tincture: Because, that strong transporting Spirit doth also fix the volatile Soul of Metals, and render it constant in Fire. And, although that Subject was most volatile, from which the Tincture was distilled by the Salt of the World, as by one only Distillation from common *Sulphur*, *Auripigment*, *Cinnabarine Sulphur*, and the like; yet you will acquire a Tincture, constant in all Fire, not only for Humane and Metallick Bodies, but also for Gems. So very potent Virtue is latent, in these abject Subjects, and in the Spirit and Salt of the World, rejected by the great Troop of proud Men. But the Method of using such Pearls legitimately, for the

Transduction of Metals, had need to be Sealed up with the Seal of the laudable Philosopher *Harpocrates*, lest so great a Treasure be cast under the Feet of sordid Swine. Touching a like *Compendium* of fixing Volatile Metals, and Minerals, we (GOD willing) purpose hereafter to teach more at large.

Now, we having generally understood, what our Salt of Philosophers is able to perform in the Transmutation of Metals, I judge it not amiss, to discover; how great, profitable and powerful Faculties, it is also endued with, even besides the Transmutation of Metals. But here, by the way it is to be understood, that our Salt of Philosophers is insignized with many other Names, which ancient Philosophers imposed on it, not without pregnant Reasons. For, according as they beheld the various Wonders they were able to perform by the help of that; so they also gave Names unto it; sometimes, they called it the *Soap of the Wise*; another time, *Hercules* or the *Herculean Key*; sometimes, the *Key of the Philosophers*; &c. and all this by reason of its exceeding great Potency and Virtue, whereby it always rendred it self worthy of one or other of these Names. *Why did they call it, the Soap of the Wise?* Because it renders those Metallick Bodies, which are washed with it, most purely white. Indeed Washer women have their Soap made of Oyl and *Lixivium*, with which they wash filthy Garments unto whiteness. *Leather-Dressers* use a kind of Soap to cleanse their Skins from all Impurities. Also, *Fullers* have their cleansing Earth, with which they well know, how to purifie their sullied Cloaths. Nor do *Apothecaries* use their Herbs for Medicaments, before they have washed them in clean Water. So also, common Chymists so long wash impure Metals, by dulcified Corrosives, till they pass into ☉ and ☽. But

most experienced Philosophers wash Gold, until it becomes Tincture. Hence is that kind of Soap, which they use for washing, called the *Soap of the Wise*.

But some may object, saying: I contradict my self; because a little before, I said, Gold and Silver were Homogeneal, and did not at all participate of Heterogeniety. To whom I answer. I confess, I did say so, yet I would be understood, to speak so with reference to those common and known Waters, with which, otherwise Chymists do generally work upon their Metals, dissolve them, separate them one from another, and wash them. Because on Gold and Silver no change falls, but they always remain in one and the same Essence, according as they are progenited by Nature, therefore, I said so. And the Reason, why it is thus, is, because *Aqua Regis*, *Aqua Fortis*, Spirit of *Vitriol*, or other Corrosive Waters, are not true Keys, endued with the Virtue of penetrating into the heart of Gold, or of opening the most firm Closure of the King. For although they do very much corrode Metals, and dissolve them, yet every Metal remains in its Essence, without any Separation of parts. But on the contrary, our *Menstruum* is a sweet Key, far more conducible, and better than Corrosive Spirits, and therefore, by Philosophers is not undeservedly called, *the Key of Philosophers*. For there is nothing so closed, but this can open it. *Our Royal or Capital Key is a Corporeal Spirit, or a Spiritual Body*, which, without any injury to it self, passeth not only through Metals, but also through the hardest Gems, and extracts the fixed Tincture of them, leaving their Bodies white; which exceeded my comprehension, the first time I beheld it with my Eyes.

Therefore, as this Spirit is endued with Power of extracting Tincture, even from any of the hardest

Adamantine Stones; so, it is also able to introduce Tinctures into the most hard Stones; and that by reason of its penetrative Power. Our principal Key is that *Hercules*, which cut off the seven Heads of the immense *Hydra*. By such an *Herculean* fortitude, *Perseus*, the Son of beautiful *Danae*, suffocated the strong unsatiable Whale or Sea Beast, and freed fair *Andromeda*, whom he took to Wife. Whosoever desires to know more of these, let him peruse *Ovid*, in whose *Metamorphosis* he may find our Key of Philosophers accurately described. Yet his Words can be understood only by those, to whom the Art is already known: Otherwise, it will be impossible, from Fables, to extract the sufficient knowledge thereof. It is GOD only, that gives light to understand abstruse things; namely, to those, who fear, love and adore him: More of which, you may find among pious Heathens, than among the Slanderous Malignant, false, Christians of this time.

This Fable of *Ovid*, I explained before some of my intimate Friends; and besides, before them shewed the Impregnation of *Danae*, *by Jupiters Golden Shower*: Yet they gave no credit to this Demonstration, because the thing seemed so vile. Would you hear it? I set a narrow-mouthed Glass Body, with a flat bottom, upon a Table, and from above through the small mouth; I poured *Danae*, King *Acrisius* his beautiful Daughter, into the Glass or Tower; then, by the Counsel and help of *Jove*, I formed a Golden shower, which (through the Roof, that is, through the small mouth of the Glass) I instilled down, into the Bosom of the aforesaid *Danae*, which she spontaneously received, and was thereby impregnated, and quickly brought forth her Son *Perseus*; who afterward, carried upon the winged Horse *Pegasus*, suddenly helped the fair *Andromeda*

and, freeing her from the Jaws of the Sea Monster, took her to Wife. Afterward, he slew the strong and unconquered *Gorgons*, and got the * ***Gold-bearing.*** *Golden Gardens. If any one looks upon this Fable, with the right Eye of his understanding, he will find, that *Ovid* hath so clearly and perspicuously described our *Hercules*, or Philosophers *Key* of *Keys*; that every one, having knowledge of our Work, in reading this must necessarily be amazed, to see the whole Art so evidently detected, and as it were exposed to sight. But its being discerned and understood by so few, must be ascribed to the defect of their internal Sight, and the darkness of their Sins, in which they have involved themselves, and are still resolved to abide in. Therefore GOD, according to his Justice, deservedly permits such Slaves of Avarice and Pride to stick in perpetual Blindness, to grope for, and in vain seek, the way of escaping those Evils. For here, the hard is Softned, the soft is Hardned, the fixed Volatilized, the Volatile fixed, the Bitter Corrosive dulcified, but the sweet Converted into a Key, opening all compact Enclosures. More touching so great a Mystery, I shall not at this time relate. But, to whomsoever GOD shall grant this principal Universal Key, he may, according to his Hearts desire, go whither he will, nothing can be able to resist him: For which so great Benefit we owe thanks and Praise to the most wise GOD, for ever, *Amen*.

Also *Virgil*, in a few *Heroick Words*, evidently enough describes the way of preparing our Red Oyl of *Vitriol*. Therefore I thought it worth while to insert his Words also, that he, to whom GOD shall give the Blessing, may the better understand the occult meaning of the Poet.

Consider first, what here is to be done.

A Golden Branch, with Leaves of Gold thereon,
Upon a Tree concealed groweth. This
To the infernal Juno *sacred is:*
But the whole Grove, with dismal shades of Night,
Obscure and keep the same from Humane sight.
And till some one shall take down from the Tree
This Golden Branch*, there can no Entrance be*
Into Earths Caverns. Beauteous Proserpine
Ordained hath, that this rare Gift divine
Shall brought be unto her. No sooner is
The first Branch cropt*, but in the place of this*
A second Sprouts, and that most pure and fine,
As did the first, with Golden *leaves will shine.*
Therefore first view it well; when rightly known
This Branch *is unto Thee, then with thy own*
Hand crop the same: For it will follow Thee,
If Thou by Fates *for this Work chosen be.*
If otherwise, no Humane violence,
Nor strength of Iron, force it can from thence.

Virgil here calls *Vitriol*, a concealed, that is, a shadowed Tree; adding, that by the help of *Proserpina*, *Pluto*'s Wife, but one Branch can be cropped by him, whom Fortune shall favour; and that it is willing to be plucked off by any Skilful Man desirous of the same. Such a Branch is consecrated to *Juno*, &c. We know *Juno*, according to Poetical Fictions was the Wife and Sister of *Jupiter*, but *Proserpina* the Daughter of *Jupiter* and *Ceres*, or (as some say) of *Isis*, whom *Pluto* the God of Hell stole away from her Parents and married her. From all which it clearly appeareth, that this Golden Branch sprouting in the green Tree of *Vitriol*, could not be cropped, or obtained without *Proserpina*'s help. Therefore if any one would crop such Golden Boughs from like shadowed Trees, he must learn to know *Proserpina*, and consult with her; because she only

can profit him, and prevail with her Husband, to wax the more hot in his infernal Sweating stove, that thence into another place may ascend a Spirit or Oyl of a Blood-Red-Colour.

But this is to be considered accurately, lest this Work, like many other of our Undertakings, be frustrated. Therefore GOD is to be prayed to for his Blessing: for if the Benediction of GOD be not present, all endeavour will be vain; as I have more than once experienced. Although I did demonstrate our helper *Proserpina*, to some of my loving Friends, and taught them how to obtain and rightly use her; yet they were all destitute of so good Fortune, as to elaborate it as it should be elaborated: Yet at length more accurately hitting the Mark, their work succeeded happily twice or thrice, but never afterward.

From which, being so evident, it is plain enough, that such *Arcanum's* are so preserved by the All-seeing Eye of the Divine Providence, as it is never permitted to all Operators promiscuously, that every of them should attain to the highest Science, and thenceforth the Good given be perniciously abused. Wherefore, although one Man communicate any famous Secret to another; yet, if GOD be not favourable, he can never prepare the same, but shall lose his Labour and Charges, spend his time unprofitably, and instead of a Golden Harvest, reap nothing but Trouble and Grief.

Hence they drew their Original, who writ of the Secret ripening Fire. *Our Fire, before Coagulation, always burns in our Glass, but externally not.* It is sufficiently manifest, that Philosophers, by their *Secret Fire*, understood Oyl of *Vitriol*; and that their Fire, is only Fire before Coagulation; after that, no

more so, but a sweet Ripening Stone. Therefore they add, that before Coagulation it is Fire, but after Coagulation not so. Aptly with this agrees that Writing of ancient Philosophers. *Visitabis Interiora Terræ, Rectificando Invenies Occultum Lapidem Veram Medicinam.* To which Monument of ancient Philosophers, we may fitly subjoyn this sutable Poesie, making for our present Purpose, and expressing the same in few Words.

Dissolve the Fixt, and make the Fixed fly,
The Flying fix, and then live happily.

In these few Words are compendiously contained, all whatsoever I have largely written in this Treatise.

Moreover, our Salt of Philosophers, besides its being a *Medicine*, and fit for Transmutation of Metals, is also endued with other famous Virtues, of which at this time I cannot forbear to write. Philosophers have written, that their Key of Keys doth indifferently open all closed Bodies, and that it is endued with a Virtue, breaking most hard and Adamantine Stones, and taking from them their inclosed Treasure; for acquiring which, there is nothing at all in the whole Nature of things given, except this our Key, by help of which the most firmly locked Inclosure may be unlocked. As for Example. A *Granate* is a Stone of so great hardness, as although it may easily be reduced to Powder, yet it can never be corroded even by the sharpest *Aqua Fortis*, nor dissolved, nor can it be Anatomized. Wherefore, although these Corrosives, vulgarly known, prevail not against this excellent Stone, (which visibly in it self contains a noble Tincture of Gold, and also is not a little impregnated with invisible Corporeal Gold, as plainly appears by its weight: For it is much more ponderous than all

other precious Stones, or the more vile small Stones) but are judged as unprofitable for this kind of Labour; yet our *Sweet Salt* possesseth so potent a Faculty, as it can easily open the same and take from it all its Treasure; in so much, as if there were but this only use of it, (and no other like, better or more excellent were known) it would abundantly satisfie every honest Man, to live amply therewith, and to maintain his Family with great Tranquillity.

Behold I present to you, yet another Royal Experiment, which I have not long since effected, by the help of our Red Stone, in the following manner.

One day I cast our Red Stone upon Gold, in Flux, only for a Tryal, whether by the help of that, the Gold would be tinged with an higher Colour; because I found, that Silver had took a yellow Colour from the same. But after I had poured out the Mixture, I found what was contrary to my Hope. For it was so far from exalting my Gold in Colour, as on the contrary, it took from the same almost all its Colour, so as it was white like Silver. At first, I was not a little troubled, that, contrary to my Expectation, I should work so unhappily. But returning to my self, I begun to think, whether this my Red Stone (being, perhaps made of Steel) was not that *Chalybs*, [or Steel] which *Sandivogius* so highly extolled in his Writings, and said, it could extract from Gold its Tincture. But since, by reason of other Business intervening, I had no leisure to proced further in the Work begun, I was constrained to leave the whole for some higher Experience to another time. Yet I cannot but wonder, that our Key of Keys should so readily unlock every Closure of Gold, and be able to spoil it of its Royal Soul: Whereas otherwise, Gold according

to the Sayings of all Philosophers, (as in very deed it is true) and according to the common Opinion of all other Men, experienced in Chymical Labours, is accounted to consist of such Homogeneal parts, as are difficultly separable. If the most wise GOD prolong my Life; and also grant Time and Opportunity of making further Tryal, I will spare no Labour or Cost to find out that *Arcanum*, until by the gracious help of GOD'S assistance, I shall become the Master of that Art of Arts. For now unto me the Gate of the Royal Closet is opened (I would not be envied for what I now say) by our *Herculean* Key in such a manner, as, I doubt not, but in a short time (unless the supream Deity, which I have no cause to fear, notably resist me) to obtain the Kings Crown made of a Carbuncle, and be able to distribute the same among the needy, to relieve their necessity. To which my hope, let the most wise GOD give a Blessing, so, as the Event may answer my Desires, *Amen*.

Moreover, Philosophers say, that whosoever obtains their Stone, can so qualifie Glass, as, if it fall, it shall not break, but be found lying unbroke, like Metal. Which indeed I have often read, but could never believe, it was so to be understood according to the Letter. Yet after GOD, by his Grace, had conferred on Me our Wonderful Salt, for Curiosity sake, I could not forbear to make an Experiment, to know, whether what was written thereof was consentaneous to Truth. Therefore, I took a little broken Glass, melted it in a Crucible, and then cast upon it only a very little of our Salt, which it continually took in, and thence received a white Colour. I poured out the Mixture, and trying, whether it had passed into another than its first Nature, I found my Glass had received a new Disposition, and became flexible like hardned Steel

Wyer, and after flexion came to its first form: But after many bendings, to and again, it at length broke. Whence I learned, that it was no Fable, but plainly possible by Art to prepare Glass so, as it may be no less flexible, like Metal, than it is transparent. But since I have not had Opportunity to make further Tryal, and cannot yet absolutely profess my self an Artist in that kind of Work; yet, I can say, that what others have affirmed thereof, is not estranged from Verity. Therefore I must wait, till Time (with the favour of GOD) give me further Experience thereof.

Also, touching the Stone it self, Philosophers write, that it qualifies its Possessor so, with Lightness and Cheerfulness, that he can, like a Bird, fly up on high from the ground; which is a thing so much repugnant to Nature, as no Credit can be given to it, unless it be interpreted Hieroglyphically, Allegorically, or Enigmatically. But that it greatly exhilarates him, who by the benefit thereof can effect the aforesaid Wonders, is very easie to be believed. For in my self I have found the like Exhilaration, when I have, with these my Eyes, made certain very great Proofs and Experiments by the help of that. When I lay, for four years, continually sick, and during that time, exercised my mind with various Speculations, making some Proofs, I at length found the Truth, and understood that this wonderful Salt, being tryed upon Metals and Stones, did most exactly agree with the Philosophers Description of it: Then, I say, my whole Nature, because of that, was astonished, and daily so notably reduced to a better Constitution, as I can never sufficiently admire the Grace of GOD, and return due Praises to him for so great Gifts. For I, who by reason of my Sickness, could never rise out of Bed before Noon, could afterward rise betimes in the Morning, and go into my Laboratory. Also for a

long time before, I could digest neither Flesh nor Fish, but was constrained to live with Bread and Wine only; yet now, (thanks be to GOD) I am able to eat some small Portion of Flesh and Fish, together with other Meats. Likewise for above a whole Year, through weakness of Body, I could scarcely write a Line or two, so as in two Years space I committed nothing to the Press: But now, GOD, the Giver of all good Gift, hath made my hands so ready for Motion, as I sing to him incessant Praises. Without that new refreshing of Strength, this present Treatise could never have been published. And this so great Good befel me from no other Cause, than from GOD, and this precious Stone.

Therefore, whosoever is desirous to partake of this great Blessing of GOD, let him not come to Me, unto whom is given no leave to Communicate; but let him come to the Love of GOD, and draw that laudable Good from him, as from the most limpid and living Fountain: Because, it is to found with him only, not with Men. If a Man humble in Heart, and void of Hypocrisie, hearing this, will follow my Counsel, he may perhaps find a prosperous Event according to his wish: If otherwise, adverse and contrary. For GOD is not wont graciously to regard the words of the deceitful, but the Hearts of candid Men.

Many other such things might be produced, touching our Tinging tone: But no necessity persuades to expend time thereabout. Enough is spoken. For whose Eyes soever GOD shall open, he will on every side see so many things sufficient for him, as not to need any further Information. All things are clear to the clear-sighted, which appear dark to the blind. GOD only is the Light, and all who are near to GOD, are by him so illuminated, as they

can see. But the more remote any Man is from GOD, the nearer will he be to the contrary of Light, which is Darkness. Therefore, whosoever desires to be illuminated with the brightness of Divine Light, must fly from Darkness, which is to be shunned. For Darkness and Light are inconsistent in one and the same Subject; which is a thing accurately to be observed by every Reader.

A COROLLARY.

We have, in this little Treatise taught, that the Salt of Metals is prepared of *Vitriol*, and that there is a difference to be observed, *Viz.* this.

Common Oyl of *Vitriol* doth indeed suffer it self to be Coagulated into a sweet Salt or Stone, wherewith (particularly) vulgar Metals are amended, and Tinctures extracted from Gems, although it wants a tinging Virtue: But Metals may also be tinged by the Coagulated Red Oyl.

We likewise shewed, that you cannot get this Red Oyl, without the help of that Goddess *Proserpina*. Yet by the way, it is to be noted, that the aforesaid *Proserpina* is no other, than a white Sulphureous Salt, which added to the *Vitriol* causeth the Tincture of *Vitriol* to ascend in Distillation. That, after it shall be duly Coagulated into a Stone not Corrosive, manifests such Effects, as we have ascribed to it. I also thought good to advise, that our Oyl of *Vitriol* in its Preparation requires great Care and Industry, that the Tincture may be made Rich enough: For otherwise, it discovers but little Virtue in Transmutation. Also you shall never get so great a quantity of that Red Oyl, as will satisfie the Common

sort of covetous Men: Because that comes not till at last, after all the White is ascended. But he, that can get a large quantity of the White, will not trouble himself to get the Red: Because the White also, by the help of *Proserpina*, may be converted into Red. Which if it were not so, the Saying of *Virgil* could scarcely be found true, *viz.* that with the hand is readily to be cut off, not one Branch only, but many other, if Fortune shall so far favour any Artist. Therefore, I forbear to write more at this time. Let him, who cannot content himself with these here written, search the Monuments of Philosophers, writing, that there is such an Art, by the benefit of which, with one only Pound of Coals, a whole Pound of Oyl of *Vitriol* may be distilled. Yet such an Artifice must not so soon be spread among the People. To whom soever GOD reveals the same, he may prepare it, according to his own desire; if it be otherwise, let him comfort himself with this Meditation of Patience, *viz.* that he was not worthy of so great Gifts. With these, Reader, I bid you Farewel, and commend to you the Protection of GOD.

THE END.

A Short BOOK OF DIALOGUES, OR, (Certain) Colloquies of some Studious Searchers after the Hermetick Medicine and Universal Tincture.

Written for the Sake of the Lovers of Hermetick Philosophy.

THE

PREFACE

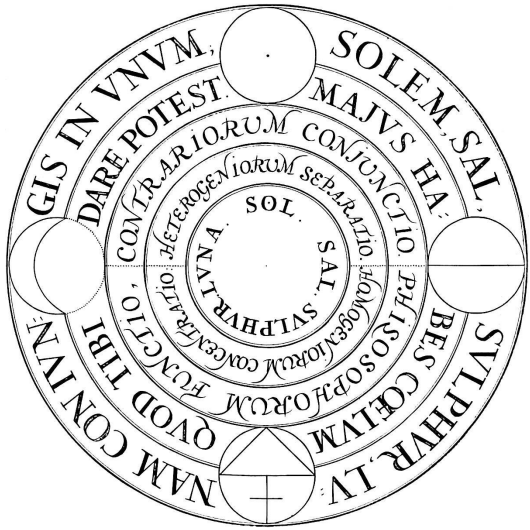
TO THE

Well-minded

READER.

I was formerly minded never to have published these Three Dialogues, but only to have made some of my good Friends, and such as had well deserved at my hands, here and there, partakers of the same. And upon this Account I permitted some [of them] to Copy them out, but they abusing that Curtesie [of mine] whereby they received them, did make others of their own Friends too, enjoyers of the same, contrary to my Will and Intention; and so it happened, that they became Common, and being on this wise often Coppied out, there crept in amongst them (as indeed usually falls out in such Cases) abundance of Faults or Errors, and the sense [and true meaning] of my Words were construed in the worser Part. Which thing when I perceived, that it would more disadvantage than profit me (especially seeing, that such a work [thus Copied amiss] did nevertheless pass under my Name, and was adjudged by others, as really mine) I deemed it, expedient, of two Evils to chuse the least, and to have regard to mine own good repute, and to publish it in mine own Name. But yet, not with an intent of getting my self some eminent Fame, as if I were wiser than others, and to have it thought, that I had more knowledge and experience than many others have; but rather, that the incredible Works of the omnipotent God, and his great Wonders, might be laid open and made known, to the infinite Glory of his Name. In the setting down of which, I do produce only such things, as my self have wrought with mine own hands, and can even yet

demonstrate by a certain and undoubted Operation, (by Gods help) at any time.



in de Dialogus.

But yet, I would not have any one thus to understand me, as if I had already wholly and compleatly finished the whole Operation, and had advanced it to a due, and throughly perfect, end, No! I cannot arrogate to my self by any means, any such matter. Thus much I only affirm, that if any one shall (in his Operation) follow the bare literal Description of these Labours, he will without any Error arrive, so far as I my self am already come, but yet with this Proviso, that he knows the true Salt of the Philosophers, and the use thereof; And as for what remains, [unfinisht] I commit unto God to bestow a prosperous Success: And this one thing I entreat, that every Body accept of the things I have here written, with the same mind I wrote them, and that he take in good part my sincere Endeavours of deserving well at his hands.

The Explication of the annexed Figure belonging to this Treatise, noted with these Words: *Inde Dialogus*.

In the four principal Points of the Circle (supposing two transverse lines were drawn, through the Center, to the outward Circumference) are placed the Characters of Sol, Sulphur, Lune, Salt.

Round the outmost Circle, are placed these Words: Conjoyn in one, Sol, Salt, Sulphur, Lune.

About the next Circle: And thou hast as great a Treasure, as Heaven can give thee.

Within the Third Circle: The Philosophers Function, is of Contraries, the Conjunction.

About the next Circle: The Concentration of Homogeneals, is the Separation of Heterogeneals.

Within the inmost Circle: Sol, Salt, Sulphur, Lune.

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*The First Dialogue, or Conference, betwixt two Lovers of Hermetick Medicine, deciphered by the Letters, A. and B. the last of which hath had a prosperous Success on his Labours, the other not, and therefore craves of this last (*viz. *B.) a Manuduction to the Work, whereby he is rendred Master of his desire.*

B. A Good health to you, my Friend! What's the matter

with you now, that you are so sad, and even loaden with Cogitations, and mumble to your self about I know not what?

A. *Oh, my Friend! I wish you the like very heartily; and am glad that you come so very seasonably, and at such a time, as I was just thinking on you, and most earnestly wishing your approach; Witness your own Writings, which I do here turn over with my hands and my mind, but yet they are so very obscure, that I cannot worm my self [as I may say] out of them, [or understand them] though I apply the utmost of my Endeavours to understand them. I have likewise read over and over again, the Writings of other eminent and belief-deserving Philosophers; still hoping, that I should yet at length attain to the knowledge of the Truth: But alas, (the more's my grief) all that I find is only this,* viz. *that I hold in my hands the slippery Tail of a slippery smooth Serpent, [or Ele] which ever now and then slips out of my hands, and doth more and more defile me. I have therefore resolutely determined with my self, that, unless God doth shortly send me some good Friend, who may lead poor me out of such a notable Labyrinth, I will throw all my Books, all my Instruments, and all such matters which I have bestowed so much time about, in vain, and lost so much by, into the Fire, and Sacrifice them unto* Vulcan*, that so I may be rid of the tediousness of my fruitless Labours, and unprofitable Cookery. But yet if you would be but so pleased, I no ways doubt, that you might by a few words [and Directions] reduce me out of the snares of so many Erroneous paths, hedged up ways, into the right path: For I well know, that you have bestowed your whole Age, your whole Study, and all your Labours and Endeavours, about such great Secrets, and have by the Divine assistence obtained the very Truth it self. And therefore I do most humbly beg at your hands, you*

would not leave me destitute of your help, but that, according to your inbred Goodness and Courtesie, you would succour me, your Friend, with some brotherly instruction, and Manuduction. Which if you either will not or cannot do, I must even conclude, not only upon throughly doubting of the Truth and possibility of this Art, but withal, on a firm persuading my self, that those Writings, which are so stuft with the Promises of golden Mountains, are nothing else but mere Old Wives Tales, and frothy Speculations of idle Men, and vain Dreams, though proceeding from Men of so great Esteem.

B. Whats this, I hear thee utter? I could never have believed you, to have been of such a broken and dejected mind. What? Would you contemn the Writings of the Philosophers, and slight them, because they are above your Capacity, and too hard for your understanding? Tis a wicked thing, to entertain such a thought, much more to utter it. I would have you, rather to persuade your self, that you are not as yet worthy of the Secrets and Gifts of so great worth: For though a Man should torment himself with abundance of hard Labours in this World, and should aflict his Body with uncessant Sweating pains, yet would he not effect ought without the Blessing of God. Do you not know that saying of *Paul*; *Tis not of him that Wills, nor of him that Runs, but of God alone that shews mercy*. You should therefore reckon your self amongst the number of those, that have run in vain, nor hath God injured you at all. What! does not Christ say, *Not all that say unto me, Lord, Lord, shall enter into the Kingdom of heaven, but they only who do the Will of my Father*. Examine now your self, and see how the Case stands 'twixt God and you. The bestowing of such great things must proceed from God, and not from the Philosophers. The Philosopher may indeed write

down the Truth, but yet it is not in his Power, to bestow upon thee the Divine Blessing, which is the very hinge on which all good things depend. Secrets of such great moment are not the Gifts of Men, but of God, who bestows them on whomsoever he pleaseth.

A. *In good time! Is this the Comfort and Instruction, which I begged at your hands? I did not request, you to be my Father Confessor, to hear my Confession of my Deeds, but rather that you would help me, being ignorant and unskilful, by some good and profitable Manuduction and Instruction: For I well enough knew, that wicked Men are never Masters of such great Secrets, nor will I rank my self amongst them. Be pleased but to regard my suit, and only shew me an entrance, whereby I may enter into the right and Kingly way: And as for praying to God, and Labouring without ceasing, leave the Care of that to me: I hope, that God will not deny his Blessing upon my Prayers and Labours.*

B. Well! since I perceive you to be so throughly bent, with your utmost study and unwearied pressing on, after such an eminent thing as this is, I cannot but shew you that way, which I my self have walked in, and that too, home to the very place which my self am come unto. Verily, I see the promised Land afore my Eyes, and do daily view its Coasts, nor do I doubt, but that I shall shortly enter thereinto, and have the Fruition of its most pleasant Fruits, if no impediment debar me of so great an happiness. And as concerning your self, seeing that you are nimbler of your Feet than I am, there's no doubt but that you will arrive thereunto, even assoon as I my self. But yet, pray first declare unto me, about what things it is, that you have spent your Monies, your Labours, and your Precious time, and all to no purpose; that so I may (as much as in me lies) the more

conveniently reclaim you from your Wandrings and Errors into the right way. Tis in vain for him that is sick, to expect help and succour from the Physician, if he does not shew the place of his Dolour and Grief. Confession is a Medicine to him that goes astray. Confess therefore the Truth, that I may hear, by what things thou hast been mis-led into so many Errors.

A. *[Alas, Sir,] I could not reckon up all, in Order, though I should have time enough of so doing. But your own time, which is far more precious, does not permit, that it should be spent in hearing my foolish Labours. Besides too, the remembrance of so many Labours in vain, and of the loss of not only so much Time but Expences too, causeth a loathing in me, the very remembrance of which I abhor, much more to make a long rehearsal of the same. You may therefore easily guess, that by my insisting upon the bare Letter only of the Philosophers writings, and not understanding the sense and meaning, I have erred from the right way, and have headlong hurried my self into so many Intricacies and Errors. I have searched into Vegetables, Animals, and Minerals, because the Philosophers write, that their Stone is Vegetable, Animal, and Mineral; but I see, that I have not had under my hands the true Matter. For if there does appear in any [of these Matters] the Crows head, yet the other Colours which the Philosophers make a description of (as the Dragons Blood, the Peacocks Tail, Virgins Milk,* Coagulum*, or Curdling, and principally that Red and Fire-abiding* Salamander*) did never appear [to my view.] Or, if these [Signs] of* Sanguis Draconis*, or* Lac virginis *appear to sight, in some other Matter, yet notwithstanding the other Colours, and other Signs, which the Philosophers make mention of, did never discover themselves [to my view.] What Labours soever I have used, and whatsoever matters I have dealt in, I have even Laboured in vain,*

and lost both my pains and Expence, and never have received any good from my laborious Operations. Hereupon I did at last even almost throughly persuade my self, that it was an impossible thing, that, out of one Matter, and by one and the same Labour, one Colour should orderly succeed another, and become visible to the sight, by the bare help of an external Fire, as for example, first if all, in the putrefaction, the Crows head, then the Peacocks Tail, then the Dragons Blood, Lac virginis*,* Coagulum *or Cheeslike Curdling, and at last the fixt* Salamander. *But forasmuch as it appears to me, by the reading of your Writings, that you have orderly met with the sight of all those Colours in your Labours, in such manner as the Philosophers have described the same, I do firmly believe, and give Credit unto your Sayings, as unto a Man that makes Conscience of his ways, supposing, that you would not write such things unless you had wrought them with your own hands, and could even yet perform them at any time. I only beg your help in shewing me the true matter, and the Key thereof, that I may so order the Business, as to cause the Visibly appearing of one Colour after another, in one Glass, and by the bare help of one only Fire; if you do but thus much for me, you may be confident that I shall be the most contented Man [alive.] Nor do I doubt, but that as touching the remainder, as Multiplication, Projection, and such like, I shall find out those Operations well enough afterwards, by mine own studious Search, if I can but once hit on the entrance of the right, true and Kingly way.*

B. [Hold a little, and] do not assume so much unto your self, and think that the things which are so easily said, are with as much Facility done. Have you not Read in *Bernhard Trevisan*, that a certain [Friend of his] had that great Secret as well as himself, only he knew not how to multiply it, nor would *Bernhard*

reveal the same unto him, as having the self same Books, out of which the said *Bernhard* got the knowledge of Multiplication, himself. But be it as you desire, and seeing you request no more from my hands at this time, but only the matter and some Key, I will satisfie your request, as far forth, as the time and occasion will at present permit.

Attend therefore with diligence to those things which I shall say unto you and such things they shall be too, as unto which you may boldly give Credence. I will not (according to the Custom of many) seduce you, nor will I reveal unto you ought else, but what I have experienced by the Labours of mine own hands: And if you follow the guidance of the bare Letter it self, you will not err, unless God will not permit you to proceed, [but] throw some peculiar impediment and lett in your way.

As touching the matter, which the Philosophers have made that Universal Medicament of, I find that it is not merely *One*, but *Divers*, and this is clearly evident from the Writings of the Philosophers, who openly hint unto us, that one of them used this way and matter; another, that, and yet at length became Masters of their desire notwithstanding. From whence it necessarily follows, that the different matters, of which is made one and the same thing, are not unlike in their more inward parts, but alike, though they do not appear so to be, as to their external hue. For it is a thing possible for two, three, or more things to differ much, [from each other] as to the outward form and shape, whereas notwithstanding in their inward parts, they are so agreeable to each other, as that the self same thing may be produced from the one as from the other. Take, for an example of this thing, the *Seeds* and

Roots of some Herb, the which, as to the outside form, have no likeness to each other, and yet for all that, do they produce one and the same Herb, if they are implanted apart in the Earth. Just thus is it with the Metallick Buds and Stocks which are wont to sprout forth, as well from the Metallick *Roots*, as from the Metallick *Seeds*, in so much, that a Tree grows up of the same Nature and Form from the Metallick *Root*, as Springs from the very *Seed* it self. Now 'tis evident, that in the Metallick Kingdom, ♄ or Lead supplies the place of the *Root*; ♂ or Iron, of the Trunck or Stock: *Jupiter* or Tin, of the Bark, ☿ or *argent vive*, of the juice betwixt the Trunck and the Bark; ♀ or Copper, of the green Leaves; *Lune* or Silver, of the white Flowers; and ☉ or Gold of the ripe Fruit and Seeds. If therefore the Metallick plant is to be multiplyed, that Multiplication cannot be more commodiously effected then by ☉ and ♄, that is, by the Seed, or by the Roof of the said Tree. Whosoever therefore desires to perform ought in this kind, he will not find any convenienter matters, then ☉ or ♄, that is, Gold or Lead. But yet I do not mean those vulgar Metals, but such, in which the Gold lyes as yet immature and invisible, and which is to be made visible, fixt, mature and constant by the help of Art. So then, the self same thing which may be discerned, above, in *Sol*, and appears visible to the sight, is in like manner found beneath in *Saturn*, in an invisible manner. And thus experience it self shews, that, out of two things unlike, as to the outward shape, one and the same thing like them may be made, because their internal parts are of one and the same Nature, and this outside difference or unlikeness proceeds only from the impurity, and defect of Maturation. Out of *Saturn* therefore, as out of an unripe and impure Gold, some good may be

produced: But it must of necessity be well washt, and out of it being well washed, may the first *Ens* of Gold be extracted, and be fixed. But now, if out of mature Gold, you would yet educe something, it must then again first putrefie and be reduced into nothing, afore any more noble thing can proceed there out of. For it is like to the Seed of the Vegetables, which do's not admit of any Multiplication of it self, unless they are first put in the Earth and consumed by Putrefaction: And this is proved, and asserted by the Testimony of our Lord Christ himself, who says, that except a grain of Wheat rot in the Earth, it cannot bring forth any Fruit. Certain it is therefore, and firmly true, that Gold cannot be translated into a better degree, unless it be again destroyed, and reduced into such a Body, as out of which it cannot be reduced into its former Golden Body [or Form.]

A. *What is it that you say, can it ever be possible, that a Metal so constant in the fire should be on such wise destroyed, as not to be reducible unto its former Body? Verily I have but small reason to boast of any great matters done by me: For I have for some years past tormented my self hitherto, about decocting and cooking of Gold: I have dissolved it in sundry sharp [and Corrosive] Waters, and have beheld its ascending with its yellow Colour, by a Retort and through an Alembick, but yet I never got ought else in the Precipitation of the same, but common Gold, and which was not in the least bettered thereby. And therefore I did at last conclude with my self, as many others have done, that the common Gold could not be the matter of the Philosophick Stone, and it holds hidden within its Body, no more Tincture than it stands in need of, it self; and that therefore it has not the Faculty of tinging other white Metallick Bodies.*

B. I do not at all wonder at your falling into this Opinion. There are many others besides you, that are of the same mind; Nay, I my self doubted much about this very thing, *viz.* whether or no, Gold hides within its *inward* parts any more of *Colour*, than it shews unto us in its outside shape. But then on the other hand, it could not seem at all likely, that such eminent Men should publish such great Fallacies and so many Lyes, merely to seduce Men, by. And whilst I was thus wavering in this kind of doubting, the Truth did at last (after sundry and many inquisitions) by a mere chance present it self unto me; in so much, that I am now clearly convinced of my Error, and am even constrained to believe, that a true Tincture, tinging the imperfect Metals, may be extracted out of Gold. For well may that be believed, which the Eyes see, and the hands feel.

A. *I rejoyce exceedingly to hear you say, that you have seen the Truth, and I hope that in time you will refresh me with a sight thereof too.*

B. Whatsoever lyes in my Power to serve you by, I will not in any Case deny unto you: But thus much I would you should know, that the Splendor or brightness of the Truth it self hath shone upon me, but I have never as yet brought the work it self unto an end, by reason of the want of time: But yet however, I am confident and firmly persuaded, that if no impediment chance to happen, I shall bring it to its wished end. And now seeing you are by some years younger than my self and that you have store of time and all other Conveniencies, I dare be confident, that you would finish that Operation much sooner, should I but reveal unto you those things, which I am already arrived to the knowledge of, by the Labours of mine own hands.

A. *Proceed on, I pray, in this your Liberality, and make me, as being a Man following after Honesty, partaker of your Happiness, and I shall be everlastingly obliged to you and yours. And whatsoever Labour or Task is to be undergone for you; I will with a ready and willing mind undertake it, and in all things respectfully regard your wholsome Instructions.*

B. Well! I trust you, and believe, that you will perform your Promises, by which you bind your Credit; but however you shall give me your hand, and Promise me, that you will conceal the Art in most profound silence.

A. *I will, here's my right hand, and Credit upon it.*

B. Hearken then, with your utmost diligence, and with an accurate intention, receive the things which I shall speak unto you.

A. *I do, and listen attentively.*

B. In the first place then, you are to know, that, if you would make any good thing out of the common Gold, you must perfectly cast out of your mind that Opinion, which hath hurried not a few into no small difficulties, imagining, that (by the help of some *Menstruum* or other) the *Colour* of the Gold is to be extracted out of it, and that Silver is to be tinged, with that same Golden Tincture thus extracted, and that, to the remaining white Gold, its Colour may be again restored by the other lesser Metals, as ♂ or *Antimony*, Copper, or Iron: Such thoughts as these you must clearly remove out of your mind, as being those which rob a many of their precious Time and Estates. There are several ways, by which I know how to extract the Colour from Gold, but tis needless to reckon them up here by a tedious repeating of them, seeing they are not any ways profitable, but

rather cause loss of Time and Goods. The main thing you are to mind is this, *viz.* to meditate [and enquire] by an accurate and uncessant studious Search, by what means you may destroy Gold, kill it, and so compel it by Putrefaction to produce to view its internal and invisible Colour, and (on the contrary) to introvert (and hide) its external and visible Yellowness. For Gold it self is no other thing save a mere Tincture, to the acquiring of which, there needs not any other thing save the true Key, which unlocks Gold, introverts it, and renders the invisible Colour, visible. Besides, neither are those to be hearkned unto, who boast of reducing Gold into its three Principles, *viz. Salt*, *Sulphur*, and *Mercury*; and of freeing those three from all their impurities, and then, of conjoyning them again, being thus Purged, and of Fixing them into an Universal Tincture; and such like most impertinent trifling Processes, as these. For they are mere idle Dreams, and can never be accomplished, but come to just nothing, and clearly delude the Covetous Thirsters after Gain, by their vain dependence thereupon. Nor are there in Gold any of those Feces, which they prate of its being defiled with, neither doth it admit of being severed and dissolved into those three Principles. But put Case it were possible so to be, what profit, I pray, could we hope should accrue to the said Gold by such a fruitless Labour, whereas we see, that it is not in the least measure bettered by such a Separation. It remains therefore for an undoubted Truth, that Gold neither contains any Feces, nor admits it of a resolution into Three Principles, but that it rather requires to be Radically dissolved by a due Putrefaction, and to be so opened or unlockt. And farther, the Labour of such Men is likewise vain, who Endeavour by the help of Saline,

Cementations to extract from Gold, its Soul: For though such Cementations may sometimes succeed so well, as that the Gold when taken out is plainly white, yet nevertheless such a white Gold doth as yet contain in it its own peculiar Colour, the which, a little *Saltpeter* cast in upon it in Flux, doth easily restore unto it: For then that whiteness vanisheth, and the Truth appears, and shews you, that it neither lost its yellow Colour, nor its weight, but retained them both, in the Cementation. Nay, we have been many times deceived our selves by these kind of Operations, and have persuaded our selves, that we had dispoiled the Gold of his Colour or Tincture by the Salts, whereas it had but only attracted a certain *Sulphur* out of the Salts, by which it was made White. You may give Credit unto me, for I speak experimentally, and do not tell you dreaming Stories. I will instance it unto you, by an Example. Dissolve a little Gold in some *Aqua Regis*, and pour the Solution upon powdered *Tartar*, that so being poured upon the said *Tartar*-powder, it may be hid and covered over: Put this *Tartar* thus moistened with the Solution of the Gold, in a strong Crucible, the which you must cover well with a Cover, and lute it: Or rather, put it in a Cementary Pot or Vessel, which will be better. The Vessel being placed in the Cementary Fire, the Gold will extract a peculiar *Sulphur*, and become White and Brittle, after its Separation from the *Salts*, by being melted. And now who is it, but would believe, that the Salts had extracted the Colour of the Gold from it, whereas it is no such matter. For a little *Saltpeter*, or else the *Cineritium*, or *Cupel* can drive away all this white Colour, and restore it to its former Yellowness again; and this is, what my self have several times done and experienced with mine own hands.

A. *Now again, here's a new Story I never heard of afore, who would ever have believed, but, that when they had taken their Gold (tinged with a whiter Colour than Silver) out of the Cementary Vessel, it had been clearly dispoiled of its Tincture? But now seeing it is not so, there must of necessity lye hidden under such an Action as this, some other Secret and Wonder. Verily it is no trifling Matter thus to make Gold white, without the help of the white Metals; and it is the more wonderful too, because it is not known, from whence that white Colour receiveth its Rise: It could not get it from the* Aqua Regis*, nor could it have it from the* Tartar*, and this makes me still wonder the more. And therefore, pray, rid me of this doubt, and unriddle the business unto me, for 'tis not without cause, that I suppose some great Secret may lye thereunder hidden.*

B. Attend diligently to what I say, therefore, for its impossible for you to apprehend all things at one very dash [as I may say, and at first.] We will first of all treat about the Gold only, and of other Secrets afterwards in due time. But yet [by the by] I would have you observe in this place, this one thing; that as touching that *Sulphur*, which made the Gold white and brittle, there must needs be a notable Friendliness betwixt them, because it was so easily extracted out of the *Tartar* by the Gold. And upon this Account there may be ground to suppose, that if the Gold were left lying longer in that close Cementation, that *Sulphur* which rendered the Gold so white, might haply be rendred Red, and fix in the Gold. For every *Sulphur* is a Tincture, when it is made fixed, and gets an Ingress, from the other Metals. Do not undervalue this Secret, but fish out the Property of this thing, by a more accurate Meditation, for you will draw from thence much Good.

A. *Verily, I can methinks conjecture, that this very knack hath more in it than it shews for; I will search thereinto more accurately; perhaps this very way is a nearer one, than that which requires the inversion of the Gold. I remember that I have read amongst the Sayings of the Philosophers, this Expression;* That their Gold does not tinge, unless it be first tinged, nor receiveth it a Red Colour, unless it be made first White. *I perceive, that Nature is more abundantly stored with infinite Riches, and that it cannot be so easily Searcht out to the bottom, and the longer a Man seeks, the more he finds and meets with; insomuch that at last, there is such plenty of good things offering themselves to such Seekers, that it makes them puzzeld which to choose, seeing they so commend each others Benefit and Profit. Besides, your words are very hard to be understood, and hard to be born. For it seems a thing exceeding all belief, that the most constant Fire-during-Metal, Gold should be so changed, as to be no more Gold, and very hardly, yea, not at all reducible by the help of Art into its former Body. I do often meet with that Opinion and Decree of the Philosophers in my frequent reading of their Books,* viz. *that Gold must be putrefied, if any better and nobler thing is to be generated thereout of: But whereas it seemed unto me a thing beyond the Power of Nature, and altogether impossible, for such a constant Matter to undergo any Putrefaction, I supposed that the Philosophers pointed at some other thing by that Putrefaction of theirs. Mean while, I earnestly expect from you a Demonstration of the possibility and Truth of this thing.*

B. Come then, on God's Name, a little nearer me, and heed well the things which shall be shewn unto you.

We will here take half an Ounce of common Gold,

and put it into this *Aqua Fortis*, made of *Vitriol* and *Saltpeter*, whereto we will add the same weight as the Gold is of, or a little more, of our *Saltarmoniack*, without which, the *Aqua Fortis* alone, and by it self, is not able to dissolve the Gold.

A. *Pray, Sir, why do you say, Our* Salarmoniack*? Are there several and different kinds of it? For my part, when I dissolve Gold, I put into the* Aqua Fortis*, that [common]* Salarmoniack*, which is every where to be had in the Merchants Warehouses, and is very fit to dissolve Gold into a Yellow water.*

B. You speak very well after your own way; And I confess, that every *Salarmoniack* mixt with *Aqua Fortis* is very good to dissolve Gold; nor is this any new way, for 'tis in very much use amongst all the *Chymists*, who are wont on this wise to dissolve their Gold, but yet that which is thus dissolved, still remains Gold, and doth easily admit of being again precipitated out of the *Aqua Fortis*, and of being reduced by Fusion into the former Body, it had afore its Solution. But if so be, that the Solution shall be made by the help of our *Sal Armoniack*, then is the Case vastly altered, and your attempting its Reduction again will be in vain. For if Gold be but dissolved barely once with our *Saltarmoniack*, it admits not any more of melting, nor doth it of it self return again into a malleable Metallick Body, but gets a Reddish Scarlet kind of Colour in the Tryal [or Crucible] and remains an unfusil Powder. And if you add some *Borax* thereunto, and set it in the Fire then to melt, it will pass into a Red Glass, which is a sign of its being plainly destroyed, and of its being transmuted into another Body. And therefore I dare aver, that there is seated in our *Salt Armoniack* a power of inverting, and transmuting Gold, and of

making it fit for the Philosophical putrefaction, which thing is impossible to be done by any other Salts whatever they be, and what Name soeever called by.

A. *Certainly, this is a Divine miraculous thing, to subject Gold, so mightily constant in the Fire, unto Putrefaction, and to reduce it by Putrefaction, into a nothing: For I have read too and again, amongst the Philosophers Writings, that it is an easier thing to make Gold by Art, than to destroy Gold made by Nature. And therefore this Salt must needs be a very wonderful one, which is able to effect these and other, the like almost incredible things.*

B. Well may you term it a wonderful Salt, for so it is, the like of which, no Man will find in the whole World; though to such as know it, it is so vile and mean a thing; insomuch that scarce any one would think it likely, that such things could be done thereby, as are wont to be, should it be but named by its own proper Title. Does not, I pray, that Philosopher, *Cosmopolita* [or *Sandivow*] confess, that he hath oftentimes declared the Art, and Secret of the whole Philosophick work, word for word, sometimes to one, sometimes to another, and yet they would not at all believe him, by reason of the meanness, or vileness of the Work? And does not he make frequent mention of his own, and not the common *Sal Armoniack*? But that you may yet give more belief and credit to our Salt, I would have you read the *Turba* of the Philosophers, wherein you will find all those things which they have published concerning their Salt: And amongst others, hearken to those few words, which the Rosary mentions: *Our Salt dissolves Gold into a red Colour, and Silver into a white Colour, and transmutes them out of their*

Corporeity into a Spirituality, and with our Salt, are their Bodies calcined. And for this reason, *Lumen Luminum,* also says, *That if the Omnipotent God had not created this Salt, the Elixir could not have been perfected, and the Study of Chymistry would have been in vain. Avicen* saith, *If thou hast a desire of getting Riches, prepare Salts, that they may be changed into a clear Water, for by the Fire are Salts changed into Spirits: Salts are the Roots of thy work. Hermes* saith: *All Salts are Enemies to our Work, and to our Art, save the Salt of our* Lune: *Arnoldus* saith, *Every Salt that is well and rightly prepared, is of the Nature of* Salt Armoniack, *and the whole Mystery of our Art consists in the Preparation of common Salt: He therefore that knows Salt, and its Solution, to him is the Mystery of the ancient wise Men known. And therefore bend the utmost Meditations of thy Wit upon the Nature of that Salt only, in which the Wisdom of the ancient wise Men, and every Mystery, is found hidden and concealed.* The Writings of the Philosophers are full of those and such like Sayings, and they do every where mightily insist upon Salt. And now, what think you of these Testimonies; what! do the things I have spoken, yet find any belief in your Breast?

A. *Yes Verily, and now I am on your side; but yet I do as yet desire, and heartily wish for this one thing, that you would for once let me see your Labour, whereby I may convince other incredulous Persons, and make them believe too.*

B. Well, I am content; and come let us go to work, and let us put the Gold in its requisite *Menstruum*, and place it in warm Sand, thereby to hasten forward the Solution of the same; though there is strength sufficient in our *Menstruum*, to dissolve the Gold in the Cold without Fire. We shall in a short time see it

of a yellow Colour: And behold that very Colour, and the Gold it self is so changed, as it is never more reducible into its former golden Body. Thus have you now the entrance and beginning, which as yet is vastly distant from the wisht for end: And when you now see the beginning, know, that is the first day of our Philosophick Labour. Next, let us proceed to the Putrefaction of the dissolved Gold, without which, no Colours present themselves to our view. Behold in this very moment, *Sol* begins to wax black, and in a little while after it will conceive such a thorough blackness, that it will be like to Ink, and may serve to write withal on Paper. This blackness, the Philosophers call the Head of the Crow, by that Name pointing out unto us their Putrefaction; by which, the second day bf our Philosophical Labour is finished.

Our Ground [or Earth] therefore, being sufficiently enough moistned, we must beseech God to bestow upon us the hot shine of the Sun; for without the Suns heat which stirs up the Life in all things, there cannot possibly be any increase and growth. Lend me therefore your best attention. Assoon as the putrefied Body of our *Sol* shall feel the warming heat of the Sun, its blackness, which was the true Sign of its Putrefaction, will vanish away by little and little, and give place to the access and approach of many most delicate Colours, the which, the Philosophers have named the Peacocks Tail, and this finisheth the third day of our Philosophical Labour. And now, when the Fruit-producing Sun shall have thus illustrated our Field, or Ground with its warmer Rays, but for one day as yet, we may easily see, what is farther likely to come to pass hereafter.

A. *Huy da! what a wonderful thing is this, that I see*

here? in how short a time, and how speedily hath the Peacocks Tail charged it self into a thick Blood? Who could ever believe it, unless he had seen and beheld it with his own Eyes?

B. I confess it is such a thing as may well cause in any one most exceeding admiration, seeing that there proceed from Art and Nature, Operations of such great moments: God hath made all things very well, and should he not permit such an admirable changing of Colour, to appear in the Operation, verily the Philosopher would be in doubt, whether or no he might hope for an happy Success of all his Labour: And now upon the occasion of this Blood-like Colour, is arisen the Name of Dragons Blood amongst the Philosophers, who say, that when this Colour appears in view, the fourth day of the Philosophical work or Labour is finished.

A. *Good God! how great, and how wonderful are thy wonderous Works, who can find them out by his own Search and Industry? There do daily happen greater and greater encreasings of our Faith, seeing that I behold with mine own Eyes, such things as heretofore exceeded all my belief. And I entreat you to tell me this one thing, whether or no, there lies in this Blood, as 'tis now prepared, a most excellent Power of healing Diseases or no, and if it may safely be made use of, for the healing of Sicknesses without any farther Preparation?*

B. Yes verily, there does lye therein hidden, an incredible healing Faculty, and this, its very Signature doth openly witness. For God doth not sign or mark all the Herbs, all Animals, all Stones in vain, by the external Signature of all which, it is an easie matter to know, what use they are of for Mankind. Forasmuch therefore, as our Gold is turned into a thick Blood, it is a most certain Testimony, that it is

Serviceable for the curing and amending of Man's Blood. For, if the most ancient Physicians have made use of Gold, reduced either by filing into a most subtile Powder, or by beating into most thin Leaves, in the Cure of the most desperate Diseases, yea, and of the Leprosie it self too, and this not without Fruit, and Success; how much greater commerce then will this Gold of ours thus changed into a Red Blood, have with the Blood of Mankind. Would it not [think you] abound with a greater Power of freeing it from all false and superfluous Aqueity, and other evil Humours and Impurities, and of reducing it into its former State of Good health? For the occult Virtues of the Gold are no more shut up now, like as when the Corporal filed, or leafe Gold held them lock'd up, that they are unloosed, and released from their Fetters, and so perform their work by most free and unclogg'd Operations. And seeing that Gold is, by Ancient and Modern Physicians, attributed to the Heart, and to the whole Blood of Man's Body, and seeing that experience it self hath demonstrated, that it takes away the preter-natural affects of the Heart, and heals the corrupted Blood; why should not this our Blood of Gold effect the same with greater Efficacy, and a more happy Success. With this very Blood, have I already performed wonderful things in the most grievous Diseases in the Bodies of Men, after they have been first purged with some *Panacea*. I have therewithal healed the Leaprous in a short space of time, and such as have to no purpose made use of the assistence of the most eminent Physicians for ten or twelve years continually, to their great Costs and Charges, and this I can evidence by most clear Testimonies, which I keep by me. Nay farther, even at this very day in very many places, into which I have sent of this Blood, the detestable Leprosie, the

French Pox, and other most grievous Diseases of the Heart and Blood (to the Cure whereof, Gold is in an especial manner ordained by God) are taken away by an admirable way of healing: For seeing, that (as we said afore) it strengthens the Heart, and mundifies the defilement of corrupt and polluted Blood, and purgeth them away, it must of necessity likewise expel, as well the open or visible, as the occult and hidden Diseases of the Body of Man. For if Nature be but corroborated, it doth easily subdue and expel Diseases, by the help of other very small Medicaments; the which thing I have by my manifold experiences found to be most true, when I have adjoyned this Aureous Blood to other sutable Medicaments. For it cannot be exprest, what, and how much I have done, both in young and old, with this very Blood so exhibited, in the *Stone*, *Gout*, *Dropsie*, *Leprosie*, *Epilepsie*, and other Chronical Diseases, which have taken deep Rooting in the Body. Therefore if God shall please to lengthen out my days, I will very suddenly publish the use thereof, that so it may be brought into common Use in all Diseases. For this Golden Blood may [probably] be the potable Gold of the Ancients, which never more suffers it self to be reduced into its former malleable Body. I have sundry ways attempted to reduce it, but never could effect the same. But yet this one Case I except, *viz.* a little of this dry Blood, being put upon molten Gold, hath ingress into the same, and the residue swims at the top thereof like an Earth: but yet that little which adjoyned it self to the Gold, is of so great a Power as to make all that whole Body of Gold which it entred into, brittle, yea so brittle, as that it suffers it self to be beaten in a Morter into most fine Powder.

A. *I Marry, Sir! these are Miracles indeed, which I see*

and hear; who will make any farther doubt, but that the Universal Tincture which heals the Sicknesses, or Distempers both of Men and Metals, may he prepared, out of this Golden Blood? For all the Philosophers do with one Consent confess, that their Tincture, when quite perfected and cast in upon molten Gold, doth render the same brittle. And now seeing this Golden Blood of ours, being as yet immature, and not prepared, doth effect the same, would it not, I pray, perform the same much better, if it had but Ingress given unto it, by inceration, whereby it might slow the easier, and enter the more readily. I do not now at all doubt, but that this aureous Blood both can and in time will become an universal Tincture full if Medicinal Virtues.

B. Although I am not minded publickly to disclose an *Arcanum* of such great moment, and so great a Mystery, and to throw such a precious Pearl afore Swine; yet I am of the mind to prepare some quantity thereof, and to part with so much unto the Sick that need it, and that shall desire the same from me, as is requisite for their Use. And not only to the Sick, but to others too, that are willing to apply it to other Uses and Experiments; but especially unto those who would fain try, whether or no, even this very Blood will turn it self (according to my Description) into a white Milk, and then into a Red Stone, and, by a new Reiteration of the work, pass through all Colours. This desireousness, or inquiry after the Truth cannot at all prove any ways disadvantageous to me, or mine. For the Art it self will always remain an *Art*, unless it chance to happen, that some one or other Searcher, which is of a more subtile Ingenuity, should, by his diligent and serious inquiry, search out the very Foundation of the Art it self. Which if it should so come to pass, he must then think, that God

hath vouchsafed this Gift unto him, and that he now considers, and well knows, what esteem he ought to set upon it, and by what means he ought to hide it. However, this is most certain, and indubitably true, that this Doctrine, and instruction of mine own prescribed in my Writings, will be a spurring encouragement to abundance of Men (that have hitherto exceedingly doubted of the Truth of this so great a Mystery, and shall now come to know it, laid open by me with such evident Demonstrations,) and cause them to search with a greater and more serious study, and to cast off all other unprofitable Coctions whatsoever. For to what purpose is it to use many things, about that which may be done by fewer and more easie. All things have their time, and so has this *Arcanum* too its own proper time. But we shall speak more of these things in the following Description of the second universal Medicine. All these things which thou hast hitherto seen, are indeed very good; but we are as yet far off from the end. Have you not likewise read in the Philosophers Writings, that the white Swan doth also shew it self in the Work? Now, if by but as yet *One* days shining, the Sun shall have illuminated by its brightness the Dragons Blood, you shall see it turned into a white Milk, which Milk the Philosophers have written off, and which at length goes into a *Coagulum*, or Cheeslike Curdling. Look therefore now upon that Milk, which you see to admit of Coagulation and Condensation, by little and little: And thus with this golden Cheese do we finish the Philosophical Labour of the *Fifth* day.

A. *God be thanked, that this days Labour hath also succeeded, as we could wish. But forasmuch as those things which you mentioned, but now come in my mind,* viz. *that we are far off from the end of the work as yet,*

and yet too morrow is the Sixth and last day of this our Philosophical week; and farther, seeing you said presently after the beginning of this our Conference, that the whole Work, would be finished in six Days space, and that on the seventh Day we may cease from all our Work and Labours, and sanctifie it, or keep it holy, and give God due thanks for all these his Benefits bestowed on us: Seeing (I say) *that all these things come now in my mind, 'tis no wonder, if they likewise create in me a great deal of Care and Puzzling, to think, how this can be, that all these things that remain yet behind may be perfected, and brought to a full end in one day.*

B. Cease your Care [my Friend!] nor do you ought else this Sixth Day, but hourly encrease the Fire by Decrees, and stir it up more and more, that so you may see, by what means our white *Coagulated* Milk will by little and little pass into a yellow Colour, and will at length be thoroughly Red, and abide most constant in the Fire. This fixed Redness, the Philosophers call their *Salamander*: The Poets tells us a Tale, of a certain Worm that lives in the Fire, which cannot be burnt or consumed thereby. Therefore, after the Philosophers have brought their work through all the Colours, and have at length attained so far, as that there appears no other, but a mere fixed Redness, they named it their *Salamander*, with which (if you except only Inceration and Multiplication) they ended their work, and so do we also finish these our present Labours.

A. *Praise and Glory be to God, by whose Divine help, we have (by so happy and desired a Success) promoted our work to its most desired end.*

B. Amen. And thus will we now put an end to our work, that so we may sanctifie to morrow, which is the seventh Day, to the Honour and Glory of the

Divine Bounty.

A. *Ah, my dearest Friend; let me intreat you not to involve me by your immature departure, in greater troubles and difficulties. There are divers scruples and doubts, and these weighty ones too, that perplex my mind, which unless you remove afore, your going away (but I hope you'l stay) I shall of a certain Truth be tormented all this ensuing Night with the most bitter Pill of Disquiet and Anxiety, and then you may well guess with what mind I am likely to celebrate the to morrow Sabbath. For I am yet as plainly ignorant, what use to put that* Salamander *to. As concerning those things, which you have faithfully disclosed unto me hitherto, I trust, I shall not err in their Operation, but as touching Inceration and Multiplication, in which, as in two Cardinal main Points, the very [Pillar or] hinge of the whole Operation lyes, as you said, I must needs confess my self more Blind, as to them, than* Tiresias *was: I must needs say, that I behold the promised Land situate afore mine Eyes, but the way that leadeth thereunto is hedged in with such Thickets, and so many Brambles, that I do not see which way I shall extricate my self out of them. Unless the mercy of God, and your help come in to my assistance, I see that all my Labours will be in vain.*

B. 'Tis no small trouble you bring me, by your importunity, don't you see the approaching Evening. You Act just according to the Custom of importunate Men, who having once gotten ones out-held Finger, do snatch in the whole hand. At first, you only entreated me to discover unto you the Matter and Key of the Art, and said, that you would easily find out the rest your self. Why then do you not seek thereafter, and let me go?

A. *Good Sir, be not displeased with this my*

importunity, proceeding from the too earnest desire, I have, of knowing so great a Secret: And Christ himself saith, if ye shall knock, the Gate shall be opened unto you.

B. Well, since I see, that I must expect no quiet from you, till you do likewise learn something from me, concerning Inceration and Multiplication, I will in a few words set afore your Eyes, things of great moment. Look to it, that you listen very Attentively.

A. *I do.*

B. Have you not read in the Philosophers, when they speak of Inceration, that the out-driven Soul is to be restored to the dead King, that the dead Body may be recalled back to Life, and that it, arising with a more glorious Body, and a more excellent Crown, may prove an helper to its meaner Brethren. The Philosophers words are, as follows. Here the Soul lets it self down, and refresheth the dead Body. For it is not sufficient, that the King be deprived of Life and so left dead: No, no, for necessity requires, that its Soul be restored unto it, which may restore its Motion, and lost Life, to the dead Body. Now, by how much the oftner, the Soul and Life is taken away from the King, and that which is taken away be again restored thereunto, which so much the stronger and more active Body, and so much the Magnificenter a Crown will he arise withal. By these few words have I laid open unto you, Inceration and Multiplication. But yet there are other ways of increasing our fixt *Salamander*, and rendring it fusible, *viz.* by the addition of Mercurial things, which, by their speedy Flux and penetrating Property, do pierce into this our destroyed Gold, dissolve it, and so bring to pass, that there is made of them both (*viz.* of the destroyed Gold, and which

admits not of any reduction, and of the Volatile *Mercury*) a certain fusile midling Body, which said Body, thus conjoyned of the two, is to be maturated by the bare Regiment of the Fire. And by this Maturation, is this universal Medicament rendred so fusible, as to have Ingress into all the Metals, and to penetrate them.

A. *[But pray Sir,] Is not this way of giving a more easie Ingress and Flux to our destroyed, and irreducible, Gold, by the* Mercury *of Metals, more facile, and a nearer one than that abovesaid way, which requires a great many Operations, by the reiterating of Inceration and Multiplication?*

B. Yes Verily, it is a shorter and easier way, as being void of many tedious Labours, for it needs nothing else, but that the *Mercury* of some Metals be put into some good strong Glass with the inverted Gold, and be so brought unto Fixation. But yet this Medicament, that is on this wise wrought up with the ☿ to a constancy in the Fire, cannot extend its Colour so largely, as that, which is rendred fusible by so many reiterated Operations, because, in every reiteration, the Tincture is exalted and multiplied. And now, have you any other demands? if so, be brief, for the Evening approacheth.

A. *Yes, Sir, there are many things, that I would ask about, but seeing that my importunity is troublesome, I will at present rest content with those things, I have heard. Only, this one thing more would I gladly know,* viz. *where I ought to seek for the Soul of the King.*

B. You must look, whither you have driven it, and there must you seek it, and, having found it, you must restore it to the dead King, and so you will again begin your Work, and you shall again bring it through all the Variety of Colours, like as you did at

the first time. For when the Soul is restored to the Body, there is made a new Solution, which is to be again putrefied, that it may turn back; and then proceeding farther on according to the same way, as was done in the first Operation, there will appear all the Colours, and they too far more delicate than in the foregoing Labour. The *Crows head* will be Blacker, the *Dragons Blood* Redder: The *Lac virginis* Whiter, and the *Salamander* more fusile, than it was in the first Operation. For by how much the oftner you shall repeat this Mortification and Vivification of the King, so much the more Magnificent, more precious, and more efficacious a Tincture, will you obtain. Believe it, and give God the thanks, and be mindful of the Poor, assoon as ever you are Master of your Desires. Come to me again upon *Munday*, that I may also teach you (according to my Promise) the way of making another Philosophical work out of the Poisonous, Volatile, and black *Saturnine Magnesia*: And so farewel.

A. *In going away spake thus with himself, Praise and Glory be unto God, who hath thus, by the help of one Man, bestowed on me so great a Grace. I now go home with a cheerful mind, and there will I most desirously wait for* Mundays *approach, that so I may likewise get, from my Friend sent me by God, that other work, [made] out of the Volatile and Philosophical Gold. But this Operation, done with fixed Gold, doth please me wondrously well, especially for this reason, because, in every Reiteration, there do always appear the same Colours, which presented themselves to view in the first Operation. Who would ever have believed, that so many, and such excellent Colours lay hid in common Gold? And now, if this can be demonstrated in the common Gold, what may be expected from the secret Gold of the Philosophers, in which (they say) many more Colours*

lye hid than do in common Gold. 'Tis a common Proverb, [I confess] that he who seeks from another comes to know many things, but [usually] renders himself ungrateful: But yet however, I cannot chuse but propose unto the Man one Question more, perhaps some sweet refreshing Solar Ray will shine upon me. My Friend! I am come again unto you.

B. Well, tell me, what more you have to say unto me?

A. *As touching those things which I have seen, I desire no farther Information concerning them. But, it will most thoroughly serve my turn, if you will be but pleased to answer but unto one Question, which I shall propose unto you: And that is this, Forasmuch as almost all the Philosophers, in the description of their Stone, do tell us, That the King is to be conjoyned, and Radically mixed, with the Queen in a peculiar Mercurial Bath, that so from them an Off-spring more noble than the Father may arise: And seeing likewise, that the same Philosophers do at large celebrate the Coition of* Mars *and* Venus*: My desire is very great, to understand your Opinion concerning this business. For if there could happen, or proceed, any good effect from this Conjunction of Gold with Silver, or* Mars *with* Venus*, what need would there be of so many repeated Coctions of the Gold?*

B. This way, which you make mention of, is not unprofitable; and, to tell you the Truth, there are yet nearer ways, the which whosoever enters into, will equally become a Master of great *Arcana*'s. I was willing to shew unto you the work upon bare Gold only, for this reason, *viz.* that you may see with your Eyes, and as it were feel with your hands, that those most eminent Colours do lye hid even in bare Gold too; which is a thing, that scarce one of a thousand would have believed. And now being certainly

assured, about the lying hid of so great a Tincture in Gold, you may with the greater confidence set about your Operations.

A. *Still more and more doth a brighter light shine upon me, Nor can I enough admire, when I look upon the Rosey Colour of the Lyon, that out of so small a Lyon, there should proceed so great a quantity of Blood, coloured with so excellent and delicate a Colour, when as notwithstanding, out of other much greater Animals, there is scarce extractible so much Blood, as to answer to the hundreth part of this Blood.*

B. What? do not you understand, by what means, such an incredible quantity of Blood can flow forth out of so small a Lyon? What, do you not know, that the whole Body of the Lyon, which is the King of all Beasts, is nothing else but the mere concentrated Blood of the heart, one half Ounce of which, being boiled in many hundred Ounces of water, doth turn all that water into Blood, as you your self have now seen with your own Eyes.

A. *I confess, that there have now been shewn to the view of mine own Eyes, such and so great things, the like of which I never heard so much as one word of, from any others. No Body would believe me, and (which is worse) mine Enemies, who are most vile Compilers of infamous Libels, would set upon me with store of reproaches and lyes, and call me Sophister and Cheater, and would say, that I boyl some* Brasile *wood, or other Red colouring Stuff in water, and so sell it for the Rosey Blood of the Lyon. And therefore, I have no reason to make shew of any knowledge of this so great a Secret.*

B. How? what will you be afraid to be a reporter of the Truth; and to manifest these great wonders of God and Nature. That very way by which I shewed unto you, that that most high Colour ariseth out of

Gold, by the self same way may you be able to shut the defiled mouths of your Enemies. And if they will not believe, that there lyes hidden such a Colour in Gold, they will be convinced by the said Lyons Blood, which, being made bright hot in a strong Fire, and afterwards boiled again in other water, will convert the same, as it did the former, into Blood, and this you may even do, as often as you please. By this it is manifestly evident, that the Blood of our Lyon is incombustible. And in our being busied about those Labours of ours, there present themselves to our view, three most delicate Flowers: The first is, a *Violet*, dyed with a mixt red and Sky Colour: Then, the White *Lilly*; and at last, the immortal *Amaranthus* shining with a Scarlet dye. But why, immortal? For this reason, because neither the strongest Fire, nor the strongest Corrosive waters can at all hurt it, or change its Colours. The *Amaranthus* is tinged with the highest and most constant Colour, beyond all other Herbs and Flowers, the which does not so soon vanish after the manner of other Colours, which other Flowers have, but abides constant for many years, insomuch, that such an Herb is kept both Winter and Summer, to make Garland and Posies, or such like, withal.

A. *If now any one could be so happy at last, as to enjoy that* Amaranthus*, he might present many pious Virgins, with Posies and Garlands made thereof.*

B. If you are desirous of using the Lyons Blood in your Operations, then follow *Paracelsus* his Doctrine, in his *Tincture of the Philosophers*, where he teacheth, that the Rosey Blood is to be conjoyned and fixt with the white Glew of the Eagle; which way seems the nearest for the obtaining of the universal Tincture.

A. *I am delighted with hearing of this: The Rosey*

Blood of the Lyon I have, but yet I want the white Glew of the Eagle; which if I could but get into my power, I would conjoyn them both together without any more delay, and bring them to Fixation. But I cannot sufficiently enough admire at this, viz. *that* Paracelsus *hath made no mention, of conjoyning the Virgins Milk of* Diana *with the Kings Blood.*

B. Paracelsus has not therefore injured any, in his not manifesting all things so clearly and openly, seeing it is the Custom with other Philosophers to do the like: If you are desirous to use Gold and Silver conjoyned together, in your working, then deal with the Silver, just as I taught you to do with the Gold, and make thereof an incombustible *Lac Virginis*, and such as admits not of any Reduction; the which is to be conjoyned with the incombustible Blood of the Lyon, and to be put into a Vessel, that so these two Bodies, being conjoyned, may be most constantly [or firmly] united, and may never be separated from each other by any kind of disjoyning. But, that you may yet better understand the whole business, I will subjoyn a few words more. Our white Eagle being put in common Water, makes the same, wherein it is dissolved, so tenacious and glutinous, as that, it can glew Paper or other things together; and, therefore it is not without cause, that this our secret Salt is termed by Philosophers, the Glew of the Eagle. For those things, which this Glew joyns together can never more be separated from each other, and this is one mutual Bond, by which the Husband and the Wife are so linked together, that they cannot separate from one another. It doth not much differ from the tye of Marriage, by which, the Husband and the Wife, or the young Man and Maid, are by Gods Command so knit and bound to each other by the ordinary Minister of God, that nothing but Death can

separate them. If now a Man and Woman joyn themselves together without the legitimate and publick Bond of Matrimony, they beget illegitimate Children, and can (when they please) break that Conjunction of theirs, and depart the one from the other, because they are not coupled with that Marriage, that proceeds from the Command and Will of God; which said coupling or Matrimony is in repute, and is generally observed for a common Custom, and as being the Will and Command of God, not only amongst us *Christians*, but likewise amongst *Jews*, *Turks*, and *Heathens*, throughout the whole World. And for this reason, the Philosophers were pleased to introduce the like coupling or Marriage in their work, and that not only of *Sol* with *Lune*, but likewise of *Mars* with *Venus*: Which Copulation, if wanting in these two last [*viz.* ♂ and ♀:] their conjoyning cannot have any good and happy Success, as daily experience witnesseth. But now if *Mars* and *Venus* be coupled by a Priest in the lawful Bond of Matrimony, they likewise bring forth legitimate Children, and such as may be promoted unto Kingly Dignities. I could yet kindle more light unto you here, concerning this our Philosophical Copulation, *viz.* by what means the most inconstant, and most highly Volatile, things may (by the Operation of the same) be so conjoyned, as that they can never afterwards be loosened from their inseparable knitting together. But at the present you are not capable of bearing any more. Whatsoever hath been now omitted, by reason of the shortness of time, shall be made up at our next meeting and Conference. But, one thing more comes in mind, which I would have you to know; and 'tis this. When you would make any good thing of *Mars* and *Venus*, you must in an especial manner beware of their gross

Bodies, which are Leprous and unfit for our work. 'Tis their Blood you must seek after, the Blood, I say, of their inmost Heart, and the true Soul that lyes hidden in that Blood, which is so very near akin to the Royal Blood. And now, that you may enjoy such a most noble Blood, you must not imitate the Country fellows, who, thrusting a knife into the Hogs necks, do save that Blood that flows out from thence, to make Puddings withal, and take both good and bad Blood together. No! You must therefore in the first place, know for a certain Truth, that you must separate out of that grosser Blood of ♂ and ♀, that most subtil Arterial Blood of the Heart, without which Separation, you may not expect any good succeeding Event. Which said Separation, seeing, I know, that you are ignorant of, I have thought good to set it afore your Eyes, which more clear and more perspicuous Expressions. [Know then] that that most pure Blood is never gotten by any other means, but by the Corruption and Destruction of the Venereal and Martial Body: By which helps, these, so gross and hard Bodies are in such wise opened, that the inmost and most subtil Blood may be drawn out of them. But yet, ther's no need of destroying their Bodies by *Aqua Fortis*, seeing that Nature her self exhibits unto us their Bodies already opened, in *Vitriol*, and hath left no more for us to do, but the Labour of extracting the most pure part thereout of. For even in the common *Vitriol*, *Mars* and *Venus* are found conjoyned by Nature. And now, when we would draw thereout of the most pure Blood, such a *Vitriol* is to be chosen, which never hath been as yet in the Fire; this, *Vitriol* is to be dissolved in water, and to be filtered and separated from all its Feces. This green *Vitriol* contains hidden in its self, the Blood of that green Lyon, out of which, the said

Blood is to be extracted by the help of a certain Magnet, that so the unprofitable and gross Body may remain behind. For 'tis the Spirit that vivifies, the Body is unprofitable. But now, in your extracting this Blood thus pure, you must not be too greedy, but have a Care, that you extract no more than a little of the best Blood: Which if you do not heedfully mind, you will also extract together with the pure Blood, the more gross and more impure, and so your work will be spoil'd. For you need only the best and most subtil white Blood of *Mars* and *Venus*. For, like as the subtilest and noblest Blood of all the Animals is not Red, but White, [*viz.* the Sperm:] Even so, the Blood of *Mars* and *Venus*, which comprehends the Virtues of the whole Body, and the true propagating Seed, is tincted with a white Colour, in the search of which, 'tis expedient we bestow our Labour. Therefore, after that we have extracted, by the help of our Magnet, some two or three half Ounces of white Blood, out of twenty Pounds of *Vitriol* dissolved in water, we then take it out, lest it should also extract the most gross Blood too, when it can find no more of the white Blood unextracted. You had therefore need be cautelous in the extraction of that Tincture, and be circumspect in the Accomplishment of the same. For we are taught by Nature and Experience, that, in the Coition of Male and Female, there doth naturally concur a white Blood to the Propagation of their Off-spring, and in defect of that, Nature is constrained to send forth a vile and red Blood. Therefore, we must here endeavour, with our utmost Care and Industry, to purchase by our extraction the most pure Whiteness, and not the most gross Redness. For in that white Virgins Milk lye hidden all Colours, and the highest Redness. This white Virgins Milk, you may promote to a Fixity and Constancy, in a pure

clean Glass, without the Addition of any other thing, the which, after its being dryed, will become black, and will be translated out of the black Colour, into several others, and at length shines with the highest Redness, which puts an end to the Operation.

But as concerning our Magnet, seeing you know it already, you will not need any farther instruction about it. You have thus heard my Opinion about *Mars* and *Venus*, and have understood, by what means some good thing may be thence had. Neither must you persuade your self, that there is any other way of having any benefit out of them; how great is the number of those, who by their vain Labours have mightily endamaged themselves, following the Writings of *Basilius*, in which he teacheth to make a Red Oyl out of *Vitriol*, which he calls Gold Philosophical. The bare literal Sense is not always, and every where in his Writings to be taken. There is no doubt, but that no small benefits are to be had out of *Vitriol*. For the Philosophers themselves do hint forth unto us, the benefit therein hidden, in these words: *Visitabis*, *Interiora*, *Terra*, *Rectificando*, *Invenies*, *Occultum*, *Lapidem*, *Veram*, *Medicinam*; *You shall Visit the inward parts of the Earth, by Rectification you shall find an hidden Stone, a true Medicine*. And now at last, to close up this our Conference with some profitable Admonition, know, that I would have thee forbear from the troublesome Coction of the imperfect Metals, by reason of the too many impurities, which create many Molestations in the Separation of them, and cause much loss of time. 'Tis better, that you take in hand *Sol* and ☽ to perfect the Work withal, which Metals do most abundantly contain in them, the Red and White Tincture, and are already freed by Nature from most of their impurities. And although, I have not as yet made the universal Tincture out of ☉

and ☽, yet there hath appeared unto me so much, from so many, and such various Operations, that I do not in the least doubt, but that the immortal *Amaranthus* may be made out of them; whereunto you may boldly give Credence, without doubting at all.

The COROLLARY, Or, Present over and above.

In this Dialogue, the Dragons Blood is so described, as if it needed full six whole days Operations, to be perfected and brought to its full end, nor did I then know any nearer way. But afterwards, there became known unto me a nearer and more compendious Process, whereby I can now (Praise and Glory be to God for the same) in a few hours time introvert and transmute the dissolved Gold, and reduce it into a ***Cons. 5. Part Sp. Ph. p.149.***Red Blood, and that by the help of one only certain White *Urinous* sublimate, concerning which, I have treated more at large in the fifth Part of my *Pharmacopea Spagyrica*. And upon the same Account have I likewise written, that the said of Blood of Gold must [needs] at length get an easie Fluxibility and Ingress by the frequent Iteration, or Abstraction of the moist Spirits from the dry Gold. But forasmuch as the Multiplicity of such Abstractions is not only full of laborious Operations, but also chargeable and requires much time; and that the studious Searcher after so great a Secret, may not by being affected with the Tediousness of so many toylsome Operations, be quite weary, and at last throw off all hopes: I do therefore commend unto every one, that other and nearer way of getting it a Fusibility and Ingress, *viz.* the incerating it by

Mercury, by the benefit whereof, he will far sooner and easier arrive unto his purpose and final Scope. And although I have hitherto been hindred through want of time, besides (many other impediments) from having compleatly finished the Operation of the said Tincture. Yet notwithstanding, I do with an assured and undoubted confidence affirm unto every one, that there is given a most certain occasion [or Capability] of the making and finishing it, and that by the hitherto described way. I bequeath to such of our Posterity, as are of a Good, Sincere, and faithful mind, those things which I have wrought with mine own hands, and withal to what issue I have brought all my Operations. It is free for every one (as time and occasion serves) to make Tryal about attaining unto the wisht for end. For my part, I do heartily thank God, that he hath vouchsafed unto me the Ability of plentifully and abundantly preparing the Lyons Blood, and of performing no small matters therewith in a Physical way: And therefore I shall be well content, though I never arrive unto the desired end of finishing the Operation of the universal Tincture.

The Second Dialogue, or Conference, Or a Continuation of the precedent Colloquy or Dialogue, treating of the Preparation of an universal Medicament out of the black venemous and Volatile, Saturnine Magnesia.

A.*Blessed be the name of the Lord, who hath caused another Day to shine upon me. I will presently haste to my faithful Master, and will beg from him the Doctrine of the second universal Medicament, that he promised*

unto me.

All hayl t' yee, my dearest of Friends! God Grant that this Day may prove happy and lucky to me and you: I am come hither to hear from you, if it stand with your Conveniency, to make good your Courteous Promises at this present, and to teach me the making and Preparation of your second universal Medicament: For I have an exceeding ardent desire, to know the manner of Preparing it, out of that Volatile and poysonous Mineral.

B. I thank you for your good Wishes, and wish unto you the same you wisht me. Look here, here's a piece of our venemous *Saturnine Magnesia*, which is the true Matter, that the Philosophers Stone is prepared out of.

A. *I pray, is this black stone the true Matter, out of which is wont to be made the universal Tincture, and Stone of the wise Men? Verily I much wonder, that this should be the Gold of the Philosophers, I am extraordinarily desirous of seeing, by what means so excellent a Medicament, and so noble a Tincture can arise out of so base and venemous a Body. I should rather adhere to that old and common Proverb, and say, Who can wash the* Blackmoore *white, which Nature hath generated Black? This now seems unto me more estranged from the Truth, than that which you propounded last week of the common Gold. For how could it seem at all likely to any ones bare reason, that such a Body could be brought into a nothing, and again reduced unto a certain Body: But time will instruct, whether this be possible or not. I will therefore very patiently wait for the Event of those things, which you shall shew unto me.*

B. What? Still more incredulity, and do you anew produce [and Practise] the Faith of unbelieving *Thomas* [*viz.* to see and feel afore you believe?] What

do you think, I would go about to persuade you, that you have a wooden Nose sticking on to your Face? Alas, Sir! my time is a little more precious than so, to spend it in an unprofitable Tattling. And that time which I now bestow upon this our Conference, is spent to this end, to free you from your unbelief, and to bring you unto a true and evident Credency; to the performance of which, I am stirred up by the Authority of the Sacred Writ, which Commands, that we reclaim such as err, into the right way, and that we shall receive from God this reward for our Labour, *viz.* our Star shall shine in Heaven brighter than others. Besides Christian love requires the same at our hands, that we do good to others. And forasmuch as I have well known your Christian like Conversation, and Godly way of living these many years past, why should I deny you the things you demand, or wind you into the Intricacies of a greater Labyrinth, seeing you have but too long stuck in them already? The things which you cannot at first understand or believe, the end will at last constrain you thereunto. Your part is to listen very attentively to all the words, I am about to speak. For I can easily take away from you all incredulity, and remove out of your mind every Scruple of doubting. How sourely you look upon this black Mineral, well, but you shall presently find, that all the most delicate Colours of the whole World are most abundantly found therein; and by the help of an Art described by the Philosophers, they will appear one after the other in Operation, even from the Black head of the *Crow*, to the Red *Salamander*.

A. *Bless me, what an ardent desire have I to see these things?*

B. Have you not read in the Philosophers, that the

pure is to be separated from the impure, and the purer part is to be ripened? Separate, say they, the pure from the impure, and bring it to Maturity. And they call Separation, the washing away of the Blackness, which being washt off, the Whiteness presents it self to view? The Fire (say they) and *Azoth* wash *Laton*; *Laton* signifies our black Mineral: *Azoth* signifies their strong *Acetum*, which wetteth not the hands. This *Acetum*, as well as our *Salarmoniack* [afore mentioned] hath its Rise from common Salt. Both of them, as to the external shape, and taste too, and Efficacy and Virtue are in a manner just alike. With such an *Acetum* is our black Matter dissolved into a Snowy-white, pellucid and very clear, water, as you may here see. This water have the Philosophers called their *Mercury*; In it, are hidden all the Colours that are in the whole World, but yet not visibly evident afore that this water, or this Mercury be put upon the water, [I believe he means, upon the Fire] and be cherished by little and little, like Hens Eggs, which cherishing drys up the water by little and little, into Earth, and renders the Colours visible one after another, as you shall presently see.

A. *[Good lack,] who would ever have believed, the things which I at present See? Our Mercurial water hath been scarce three Days in digestion, yet begins to change it self into a White Milk. And now it is [but] the eighth day, and this said Milk goes into a* Coagulum *or Curd, and within in the Glass about the Edges [of the Matter] there shines a delicate Redness, but yet I believe it is not fixt or Constant.*

B. Pray, how can it be constant, seeing it does but represent the *Dragons Blood* and will presently be gone. But, proceed you but on with this first Degree

of Fire only, and that little and little, until the whole water be turned into an ashy Colour'd earth: When this is done, we will encrease the Fire by little and little, one Degree more, which will leisurely turn the ashy Colour into a Black one.

A. *I will use my utmost diligence and observancy.*

B. Do you see now that sleeke and shining Blackness like the Head of the *Crow*, covered over with abundance of black and very small Feathers: And upon this Account, the Philosophers have called this thus appearing Colour, the *Crows* head. To this black *Crows* head, administer the third Degree of Fire, which will transmute this black head into various, most delicate Colours, shining like ☉ and ☽: Then continue on this degree of Fire, that all the said unstable Colours may vanish, and may present to view the white Colour. After Whiteness, follows Yellowness, which at last will be covered over with the constant and permanent Redness: Which appearing, the fourth Degree of Fire is to be administred, that that Redness may be more and more exalted, and waxing Redder may attain unto its due Fixity and Constancy; the which, by way of similitude, the Philosophers call, a *Salamander*, and is the end of our whole Work.

A. *I should never have so much as dreamt, that so black a Body could in so short a space of time have been transmuted into a most pure Whiteness, and that this same Whiteness could, by an admirable passing through all Colours, pass into a most delicate Redness, but I pray, when this Matter hath obtained this Redness, is it to be accompted of, as an Universal Medicine?*

B. Yes, Verily, because the curable Diseases of Men, may (by that same Matter) be restored to former Health; and that safer, better and perfectlier

than can be done with any Herbs, or any other known Medicaments. I except that Medicament, which is extracted out of this, and concentrated into a much nobler Nature. But, as concerning the Transmutation of Metals, it yields not any Profit, afore it be made fixt and constant in the Fire; to the effecting of which there is required a sufficiently great space of time.

A. *As far as I can understand, there may be a yet better and profitabler Medicament prepared, than this is.*

B. Yes, Verily, that there may, a much better and more useful, because, that with this, there are as yet admixt many unprofitable Feces, which ought to be separated therefrom: And the Case is far otherwise in the perfecting of this Work out of this Mineral, then in that which is done with Gold, for this is all over defiled with many impurities: For every one must needs think, that there are abundance of Feces [that are to be] separated from that Mineral, and by how much the more impurities are separated, so much the more efficacious must the Medicament it self of necessity be. Now in this present Degree and State it is brought unto by us, it would be sufficient for all kind of Diseases; which if we would yet have to be far more efficacious and stronger, it would be expedient, that we separate yet the more unprofitable and useless Feces, and concentrate the more pure Essence into a more narrow Room and lesser Body. For ’tis the Soul only or Quintessence of things, that heals Diseases. The shells or husks bring no Profit at all, and this the Husbandmen well know; for they separate the husks and chaff from the Corn, afore they bake Bread. The Medicinal Virtues of Herbs and Minerals are but of a small weight, afore they are freed from the Bonds and Fetters of their

Bodies: But now, after that they are separated from their Bodies, they can perform incredible effects even in a most small quantity, and such as the great weight of that Body, whence they are extracted, will never effect. Look but on a living Man that is in good Health, with how ready and nimble a Motion can he stir his Limbs, and what strength he can put forth: But as soon as ever the Soul shall have separated it self from the Body, how insensible and immoveable the Body lies, and not serviceable for any Use? It is therefore a certain and undoubted Truth, that the Life of all things wanteth weight, and this shall be more clearly, and more evidently demonstrated by the Concentration of this universal Medicament. For that which one Ounce, now, does, of this thus prepared Medicament; half an Ounce, when concentrated, will perform the same: And that which half an Ounce of this Medicament once concentred will effect; one quarter part of an Ounce, or a Dram of the same twice concentrated, will effect the same. And according to this compute, may you proceed on farther. For by how much the oftner the prepared Medicament is concentrated, so much the more Feces are separated therefrom: And by how much narrowlier the Virtues are contracted, so much the greater effects do they produce. And thus there needs not in a manner any weight in Medicinal use. That which ten Grains of an unconcentrated Medicament is wont to accomplish, you will effect the same with one Grain of the Medicine, when concentred, to be put either in Ale or Wine for some hours, if need be, or else held in the Mouth. For soe it will no less display its occult Virtues and Powers, than if the Powder of the not concentrated Medicament had been otherwise drunk down. Besides too, such a Medicament may be a long time used without losing

of its Virtues, and that not only inwardly, but outwardly also in all Wounds, Ulcers, and such like external affects. For all new Wounds, as also old Ulcers whatsoever they be, are happily cured by the laying on of those Medicaments, if the same Medicines be likewise used inwardly. Nor needs there here many *Emplasters*, *Cataplasmes*, and Ointments: Concerning which thing, see more in the Fifth Part of my *Pharmacopœa Spagyrica*, where the use of this Medicament is treated of.

Read also those things, which that most excellent Philosopher *Van Helmont* declares of another certain Philosopher, Butler by Name, *viz.* that he had a certain Stone, at *London* in *England*, which being sweld a very little in Oyl Olive, rendred the same exceedingly Virtuous, that some few drops thereof taken into the Body, would drive away the most grievous Diseases, and being outwardly applyed to Wounds [or Sores] would speedily heal them. These things *Helmont* testifies to be true, as being an Eye witness of the same. But I do not attribute such incredible Virtues unto my Medicament, for as much as I my self doubted of this Story of *Butler*, and could not believe, that any Medicament could be promoted to this so high a Degree of powerful Efficacy: But now, seeing I perceive that it is possible to Art, for the Virtues of things to be contracted into a narrow Room, and be concentrated; I do upon good ground cast this doubting off from my mind, and adhere to those things which I see with mine Eyes, and touch with my Hands. Certain, and firmly undoubted it therefore is, that not only the Medicinal Virtues and Powers of this our Matter may be contracted into such a narrow Compass, as to effect an hundred fold more in Medicine, than that more gross Body could do: But also this may be acquired or effected too, *viz.*

that hidden Colour or Tincture in our black *Magnesia* may likewise be concentrated, together with that Multiplication of Virtues; insomuch, that in the several Concentrations, the Colour of the concentrated Body may be exalted, the which, most high Colour, or exalted Tincture can never at any time be gotten, without our secret Concentration: For otherwise, if there were no need of that Concentration, it would necessarily follow, that that *Magnesia* of ours would be no other than a most pure Body, not at all needing any ablution of its gross, and unprofitable, and black impurity: But this is not so, as we said afore about the Gold, which is pure in its own Nature, and of it self void of all Defilements, and being a ripe Body and mere Tincture, needs no other thing, than this, that its inward Parts be turned outwards, and its outward Parts inward, by that Philosophical introversion, and that so its external Yellowness may betake it self inwards, and the internal Redness may come forth outwards, or (to speak the more clearly) that the manifest Yellowness may be hidden, and the hidden Redness may be manifested. But now, the Case is not thus with this our black Earth, and impure *Saturnine* Mineral; in the which, both good and evil, pure and impure, Poison and Medicine lye mixt together: Insomuch, that it is altogether necessary to separate the black and gross impurity, from that noble and tender Medicinal Pearl, and to reduce it unto Fixity.

A. *With gaping Mouth, and open Eyes, do I even swallow down your Discourse, and yet I cannot pierce into the Foundation of the whole business, nor understand it. You speak of such an artificial Concentration, and which is beyond all my apprehensions, for I never in all my whole Life time heard any thing of it, as far as I remember, much less*

read ought concerning it.

B. I will set before you then a Similitude, that so you may the readilier understand the knack. Examine well, and consider, Wine, Ale, or the Lees of Wine; and by your searching you shall find, that there is in them but very little of the Corroborating Spirit, or Soul, the remainder is nothing else but mere impurities, destitute of all Virtues. Now if some Physician or other should administer to his Patient a large Cupful of Lees, to cheer and comfort his heart withal, would you not accuse him of ignorance, and Folly? For though there is somthing of comforting Virtues in the troubled Lees, yet it is impeded, or clogged, by the great quantity of the dreggy Lees, from rightly performing its proper Office. But put Case, that it could display its own Virtues, yet nevertheless, even the admixt impurity would also exercise its own accustomed Evil, and so the Good would be confounded with the Evil, or rather be quite over powred by the same. For this reason, there is nothing more necessary, than that the good be separated from the evil, before any thing be used about making *Medicine*. Therefore even as there are Workmen to be found, who, by the vulgar Distillation and Rectification, do separate the Heart-refreshing Spirit out of the sordid Lees of Wine and Ale, and bring it unto use, give the remaining filthy dreggs and useless Feces to the Hogs to eat: Even so do we (the Lovers of the *Spagyrick* Art) separate the pure Virtues and Powers of things from the gross, sordid, and noxious impurities, afore we administer them to our Patients.

A. *As concerning these Sayings of yours, I am clearly of your Opinion, and withal do stick close to that common Proverb, which saith, Speak that which is*

Truth, eat that which is baked, and drink that which is clear, if you be desirous of a long Life. For my part, I delight to have the Kernels, and purged or cleansed Fruits, and willingly leave the husks and shells to the Swine, that are delighted with Bran and Chaff, and their own Dung.

B. I am extreamly satisfied, that I have already (thanks be to God) seen the whole Work, and have a sufficient thorough understanding of the whole Basis of the same, *viz.* that the purer and subtiler part is to be separated from the more impure and grosser part, and, by an often repeated Separation, and artificial Concentration, to be advanced into a most subtile, most pure, and most noble Quintessence, if any one has a mind to produce effects of some great moment, or to do more than common things. And now, as you have learned, from the words of our precedent Conference, the way of making an universal Medicine out of common Gold: So have you likewise again received, from this our present discoursing together, the Confection of the universal Medicament, out of our *Saturnine Magnesia*, which is the *Root* of the vulgar Gold. But, although both of these Medicaments are, as *per se* and singly alone, very excellent and effectual enough, yet notwithstanding it plainly, and clearly appears unto our ken, that the power and Virtues of both the universal Medicines admit of being promoted unto a far higher Degree; the which thing we see is possible to be done by the means of Conjunction, and is to be thus understood. When a Seed is implanted into its own growing Root, it attracts out of such a Root, which is of its own kind, or Nature a far better, and more nourishing Alimentary juice, than out of the gross Earth. For example, The Seed of a *Rape Root* being put in the Earth, produceth *Rapes* of the same

bigness that the *Rapes* were of, from whence the Seed came: And as often as you shall commit that Seed (by sowing) to the Earth, you shall, notwithstanding, never have greater and better *Rapes* than those, from whence the Seed was taken. But now, if the Seed of some *Rape* be sown into some other *Rape* which is in the Earth, and which hath grown unto the half of its bigness already; that Seed will sprout forth, and grow up like as the other Seeds planted in the Earth will do, but yet sooner, because it finds a better Nutriment in its own Mother, than that does, which is planted in the bare Earth: And hereupon, it must necessarily produce a greater *Rape Root*, and from the greater Root will proceed a greater Seed. And this is the reason, that there are such great grown *Rapes*, which make every Body wonder at them: Some such I have seen, that weighed ten, twelve, yea and twenty Pound weight. If you have a mind to try, sow a few *Rape* Seeds, throwing them into the Earth, which when they shall have grown to the bigness of an Egg, take a wooden sharp stick, and make therewith a small hole, even into the middle of the said *Rape*, and then put thereinto your *Rape* Seed, and stop up the hole with soft [clammy] Potters clay, that so the Rain may not get in and rot the Root. Thus now, that Seed will also (as being in its own Root) grow up out of this *Rape*, existing and growing in the Earth, and will dilate that its Root, and advance it to a greater bigness. The Reason's this, because it can attract unto it self a better and more convenient Nourishment from a Root of its own kind, than out of the bare Earth. And if you shall practise thus with other Seeds likewise, you will effect the same, as with this. *N. B.* From the Seeds of small *Radishes*, implanted into great *Rape Roots*, there grow huge *Radishes*. This kind of Propagation may not

unfitly be likened to a Mothers suckling her Infant, which attracteth and draws its Nourishment from the Mothers Breasts: But the Mother it self receives her Nourishment from the Fruits of the Earth, and that, being changed into a sweet Milk, supplies the Infant, whereby it is sustained and nourish'd. But that I may lay the whole business afore your Eyes, by a more full Declaration, I will yet farther add one Similitude more. Take you some wild and not yet ripe Stock of a *Pear*, *Apple*, *Cherry*, or some other Fruit-bearing Trees, such, I say, as is not yet full grown, but is as yet constituted in its first tender Age, take off from it all its Boughs, which bear [but] a wild and sower Fruit, and Cut it all off even unto the bottom, and to the Stock standing out of the Earth plant a *Cion*, pluckt off from another Tree that does not bear wild fruit, into this Stock, betwixt the Bark and the Wood of the same, where 'tis cut off with the Saw, and fence it well with Wax, or tenacious Clay, *&c.* against the Rain: If now you shall thus do, and do your work Gardner-like, that fruitful *Cion* will draw unto it self the wild Juice, out of that wild Tree or Stock, and make it better, so that it will no more bear any wild Fruit, but such as that Tree did bear, from which the *Cion* was pluckt. If now, so small a *Cion* of some cultivated and fruitful Tree can so change the wild Juice of a wild Stock, that it becomes far better, and more noble: Why, should not Gold do the same in our Metallick Tree, when ingrafted in Lead as in its proper Root? Verily in my Opinion, there is not a better Earth (from which that golden Seed may attract unto it self an Alimentary Nourishment, and so multiply it self even to infinity) to be had, than its own proper Root. But yet, with this Proviso, that all the gross and degenerate Boughs be first cut off from that same gross Root, for so, it will the easilier and

readilier change its wild and degenerate Juice, (when joyned to the golden Seed or *Cion*,) and so will be changed into a far nobler, and produce Fruits a thousand fold. You see, my Friend! what good Will I bear to you, in that I have so faithfully opened unto you all those things which I thought necessary to be known, for the perfecting of so great a Work. Ponder well in your mind, upon the Similitudes of the *Rape* and *Cion*, and believe, that what I have here spoken is not casually and at Random. For they have more hidden under them, than they seem to shew for, and than you would imagine. Length of time will open your Eyes, which are as yet blinded, as to abundance of things, (if God permit.)

A. *Surely, Sir, I cannot chuse but wonder anew, when I accurately consider the things you have declared unto me, of changing the wild Nature, of the wild Vegetative Fruits into a tame, mild, Property: And that such a Transmutation of the ignobler Nature, into a more noble One, takes place also in Metallick Affairs. They are verily such things, as are of weighty Concernment, and most worthy a most accurate Consideration. But, indeed, who can sufficiently enough consider of all the Divine Miracles? Blessed be his most holy Name for evermore.*

B. Amen.

A. *I give unto you, for your courteous instruction, most hearty thanks, and remain obliged unto you all my whole Life. And thus with what hath been said, I commit both you and my self to Gods protection.*

B. My dearest Friend, I have now performed the Promise I made unto you, and am not meanly delighted, in that you have understood the meaning of those things, which I have said unto you: But yet I cannot but admire, that you are not Covetously desirous of knowing yet more, and that you do not

Crave an yet more prolix unfolding of more matters. For you well know, that you cannot every day have the Enjoyment of my Company.

A. *For those things, which I at present received from you, do I return you most hearty thanks, another time God will vouchsafe more: The greatest desire I have at present, is to set about so great a Work, and to have the Fruition of the hoped for Fruit. If you are so minded, and bent upon doing Friendly Favours, I do request you, that you would oblige my Brother by your good turns, if he shall hap to come unto you, and Petition for ought at your hands, for you may assist him in some small, yet good,* Arcanum*: For he hath been stupid, or unapprehensive enough hitherto, and much needs some accurate instruction. But what shall I say? The sick looks after the Physician, he that is thorough Well has no need of him. Such things as are hard to be understood, exceed his Capacity: The more easie things are more commodious. And so again, Farewel.*

The COROLLARY.

I have taught in this Dialogue, *That the White Lac virginis* (after its being extracted, by Distillation, out of the Black *Magnesia*, and after its Exaltation, in Virtue and Efficacy, by Rectification and Concentration,) *is to be freed from its superfluous Humidity, and yet the dry Matter is to be made permanent in the Fire, by the gradual Operation of the Fire*. Now for the more accurate Declaration sake; these things which follow shall be yet farther subjoyned.

That Fixation, if it be to be perfected by the [bare] help of the common Fire, requires a long and tedious time, so that there's no reason for a Man to persuade

himself, that he can finish the same in one years space. I speak by my own experience, for I my self have tryed, and find that it cannot be, that one year should suffice for the finishing of this Fixation, for indeed it requires a much longer time. For after that, I had so far advanced the Matter, that it had passed through all the Colours, as to flow when put upon a Red hot Plate, and to insinuate it self thereinto, like Oyls penetrating into a dry Hide, yet was it not fixt enough nor constant, nor served it for the tinging of the Metals, but when a vehement Fire was applyed thereunto, away it went in fume; but yet not without an evident Demonstration of the possibility of the same. For as much therefore, as it does not yield that satisfactory Fruit, [and Success] and seeing that such great Labours are not undertaken, without the expectation of some Profit, and that the hoped for Fruits cannot however be gathered, afore that the said matter is promoted to a perfect Maturity, and consequently dreads not any the most vehement Storms of the Fire any more; any one may easily conjecture, that there needs (as I said afore) a more tedious space of time for this Fixation, if it be to be done and perfected by the common Fire of Coals. But now, he that has the knowledge of the secret Fire, of the Ancient Philosophers, such an one will much easier, and speedier arrive unto the wished end of the Operation. The Nature of the vulgar and fugacious Minerals doth very difficultly and slowly admit of that Fixation, which is made with the Fire of Coals: And this I was unwilling to conceal from the diligent Searcher after the Secrets of Nature; yet farther adjoyning this Admonition, [*viz.*] that a very profitable Medicament may nevertheless be prepared in a shorter space of time, and an appearance made of the admirable, and highly delightful Variation of

abundance of most delicate Colours. For the first Colour that appears is like the black head of a *Crow*, presenting it self to view like the Colour of black Glass. This blackness going off by little and little, gives place to the White, and pondrous Mass; which is called by the Philosophers, the *White Swan*, and not without reason, because that self same white Matter is not so compact and Stone-like, as that black *Crows* Head, but is porous, and not much unlike unto a kind of heap made of abundance of small and white Feathers. When this Whiteness is turned into a Yellow, those Feathers vanish, and the Mass returns to its former Compactness, and resembles the form of a yellow Stone: Of which if you put a little piece upon some Red hot Silver, or Copper-plate, it will at first stand like a Red blood, and afterwards penetrate the Copper-plate, and tinge it both within and without with a white Colour; but yet, somewhat brittle as yet, and yields in the *Cineritium*, or *Cupel*, some Silver, and operates in Medicine somewhat effectually, like the white Stone, but yet weaker. It likewise pierceth into a Silver-plate, like as Oyl into a Skin, and tingeth it with a yellow Colour, which being separated by the *Cupel*, and dissolved in *Aqua Fortis*, leaves excellent Gold in the bottom. I have not as yet made any farther Progress on the Operation, being quite tired, and weary of spending any longer, and more tedious time thereabouts, which however was necessarily requisite to the perfecting of this Tincture with the Fire of Coals. But yet I have by me all the Colours as they follow on after each other, which I can shew unto any one; whereby they may see with their Eyes the most evident possibility of Nature: To which end also I am minded to preserve those Tinctures by me, that they may be an everlasting Memorial of so great a thing?, unto my

Posterity: But for my part, I will commend [to every one] that shorter way of bringing the work to the wished end, by the Mediation of the secret Fire of the Philosophers: Concerning which, the following Dialogue, and the *little Book of Fires*, treats. For the immature First Ens of Gold, cannot be excocted [or digested] into the desired Tincture by any thing more easily, than in its own proper secret Fire; and not by a Coal Fire.

And that it may clearly appear, that I have written the Truth, I will send unto some of my Friends (God willing) some of those white and yellow Stones, to be used not only in Medicine, but in *Alchymy* too; that so they may make tryal and experimentally find, that Tinctures have a Power of bettering, and amending Metals, afore they have arrived unto the half part of their Fixation.

The Third Dialogue, or Conference, betwixt B. and C. treating of the true Universal and particular Medicine of the ancient Philosophers, (extracted) out of such Gold as is yet fugacious, or Volatile, and immature; (and is) to be ripened by their secret Fire; which Operation is by them styled, the work of Women, and play of Children.

C.*Good morrow heartily, my Friend! I wish you a good and prosperous Day.*

B. I wish you the same, whence come you to us so early?

C. *I have very earnestly for these several days waited*

for this hour, that I might see you, and have the Fruition of the most sweet Fruits of your Courteous instructions. My Brother A. *sent me hither, and told me, that you had given him leave to send me unto you this day. I do therefore Friendly request you, that you would put a good Construction upon this my Boldness.*

B. [My Friend!] I do not in the least take it ill, your Brother told me, that you were as yet ignorant and unskilled, in the more subtil *Arcanaes* and Secrets; and that you therefore needed not ought else, but some pretty easie Secret, which might be easily understood, and performed with small Expences, and yet be profitable and beneficial unto you.

C. *Indeed, Sir, to tell you the plain Truth, such* Arcanums *as are profound ones, and to be penetrated into by a subtil Meditation, and which are of great moment, do far outreach my duller apprehension: And therefore I do not at this time desire any thing, more than this,* viz. *that I may obtain something that is not costly, and yet may effect so much in Medicine and* Alchimy*, as may serve me to live a little more commodiously and plentifully, as to Food and Raiment. And that you would be pleased, to render me a Master of this my desire, is my humble request unto you, again and again.*

B. You do very prudently measure out your requests, according to your own Capacity. And indeed, sometimes, those things which are not Costly, nor are difficult in their Operation, are more profitable to a Man, than those things are, which they would fain get by the expence of a great deal of Charge, of a long time, and hard Labours: I will grant you your Request, and therefore hearken.

C. *[Sir, I thank you,] and do listen.*

B. Have you never read, or else heard from others, that those most ancient Philosophers, tell us that their universal Work, is not only most easie to be done, but withal no ways Chargeable. For they do openly Confess, that to the perfecting of their Work, a Man needs be at no more Expences, than two *Florins*, and that the Labour it self, even from the beginning to the end, is nothing else but mere Womens work, and Boys play.

C. *You are pleased to offer me delicate Dainties, easie to be prepared, for I have not so much Money as is to be laid out upon those kind of chargeable and costly Labours: Neither will my Family Affairs admit thereof,* viz. *to spend my days in such sumptuous and chargeable Cookeries, and which are so full of most great Labours, and whose event too is oftentimes very uncertain. For I have heard some say, that the smallest Errour may destroy the whole Work, and quite spoil it, and so grievously affect such as operate about such great Secrets, with a very great loss of long time, and great Expences. And therefore such a Work, as I can attend upon without letting my taking Care of my Family, and which will need the disbursment of but a few Expences, will please me better than those other Costly ones would.*

B. I readily believe, that this very thing you desire, will not only be exceedingly pleasing unto your self, but also unto many others besides. The Expences are but very small, and the Labours thereupon but little, so that each days Fire, which the Matter is to be set upon, may be taken Care for, in half an hours space. But now, though the Philosophers have made mention of very small Expences, and have comprised them in the compass of a couple of *Florins*, yet is that saying to be otherwise understood. Those Ancients made use of the greatest *Florins*, *viz.* the *Rhenish*

ones, and also the *Hungarian* Crowns, each of which is of the value of five of our *Florins*. And if you thus understand it after this compute, I can easily shew unto you the Truth of their Assertion.

C. *I do even think as you say: Sure we must not expect any [such] things for nothing; I am content, [and therefore, pray] let us proceed.*

B. If our Work be called the labour of Women, and Boys play, it is expedient, that it be like unto Womens work, and Boys play: For else the Philosophers would have used an unfit similitude. You well know, what Labours your Wife is chiefly busied about, and what her daily Labour is she imploys her self in.

C. *Yes, verily I daily see, that she doth boyl Food necessary for the Use of the whole Family, and being boyl'd sets it upon the Table to be eaten. This Labour she performs, at least twice every day, when Dinner and Supper is ended, she doth wash the Dishes, Pots, Goblets, and other Vessels, and cleans them, and makes them fit to put other new Food in, and to be served out to the Table. Besides too, this is her Office and Care, if haply a Pot be broken, or crackt, whereby it is made unfit to hold moisture any more, to substitute (in defect of Iron Pots) a new Pot made of Potters Clay, in the stead thereof: Such and the like Labours, as these, are in our Country called the Womens work.*

B. Well, be it so: I will likewise shew unto thee, such a Labour in *Chymical* Operations, as resembles this. Therefore, like as the Female Sex do first wash the *Flesh*, *Fish*, *Rapes*, *Pot-herbs*, *Roots*, *Apples*, *Pears*, or other things with pure Water, which they mean to boyl, and then put them into the Pot, and pour thereunto as much Water as is requisite, and place it over the Fire, and boyl it so long, till all the crudity,

or rawness being vanisht, the Meats become grateful to the Palat, and pleasant, and easily digestible by the Stomach. [So do we] They do likewise sometimes pour Wine upon Flesh and Fish, instead of Water, and add as much Salt as is convenient, together with some Spices, or odoriferous Herbs, by which they give the Fish and Flesh a most excellent Taste. But yet we must not forget Salt, above all the other Spices, or Seasonings, and odoriferous Herbs, for it Corrects and maturates the Flesh, Fish, and other hard Meats, more than other Spices. For we can well enough want these if they are not at hand, but as for Salt, there is always need of that, about the boyling of Flesh, Fish, and other Food. If therefore Flesh, or Fish are to be boyld well, then Salt water is requisite; and as for all the other Additions of Herbs, and odoriferous Spices, they only serve to give it a good pleasant Taste, and make it acceptable to the Palat, and to the Smelling. For the Flesh and Fish when boyl'd or stewed, do by their Magnetick Virtue attract so much Salt and grateful Savour, and Virtue, as they need: And that which remains, stays in the Water. Now the curious Dames do shut the tops of their Pots very well with their Covers, lest the efficacious Vapours should be forced away in fume by the Boyling, and not stay with the Flesh or other Meats. But the careless Housewifes do not much regard the covering of their Pots, from whence it comes to pass, that they lose these good and sweet Spirits, and then they fil up their Pots with new Water, by which doings, the Flesh, or Fish, do not get so sweet a Savour, as they would have, if that efficacious Water had been kept in and conserved. Some Women that are yet more curious, and diligent about their Cookery, do put upon their Pots, wherein they boyl their Meats, such a Cover as hath a fold in

it, by which the Collected sweet and odoriferous Vapours may distil down into an under-put Vessel, which being thus gotten, they keep by them, to refresh and cherish with them, such as are weak and sick, when need requires. Others, to free themselves from this kind of Labour, do add as much Water as need is, together with Salt and Spices, to their Flesh, and so boyl it by little and little, shutting in the Vapours with a Cover, which else would go away, and the Meat taste of burning; And by doing thus, they are not necessitated to pour on any new Water, though this slow boyling takes up more time than that, which is done by a strong and uncessant Ebullition: I would have you well to observe these things, for 'tis not without cause that I utter them. And now let us examine the other similitude, and see what those Boys Plays are, that so we may afterwards accommodate even them too, to our Philosophical work. What therefore do you see concerning the Boys Plays, with what things, and after what manner do they Play?

C. *How can I tell? They play as their Parents please to let them, or as they can get opportunity of Playing: As for my self, I do not grant my Children so much Liberty, to play when, and how they list themselves. I send them to the School and to the Church, and sometimes I allow them one hours Play for Recreations sake, nor do I allow them any other Play but at Bowls, [or Knickers] by which they moderately stir their Bodies, and exercise themselves, and Concoct their Meat, and this is far more profitable for them, than if they were constrained to sit always at home, without any exercise at all: Other play than this, I allow them not. Cards and Dice are unfit Plays for Boys, they are many times very hurtful to those of riper years, especially when by the too much abuse of them, they do so unprofitably waste their precious time,*

and cannot tell how to use a mean. I have indeed otherwise seen Boys, that meeting with some Sand get [thereout of] bright Stones, and play with them, but yet this is not usual. However, there is no play more frequent amongst Children, than that of Bowls, [or Knickers] which play they daily use, whatsoever time they can steal, to that purpose. Yea both at their going to School, and returning from School, you may see them presently busied about their Rubbers, or Knickers-play. They are very hardly restrained therefrom. If they want Money to buy the Bowls, or Knickers, they get a little piece of Potters Clay and moisten it with Water, and make up their little Bowls, or Pellets in their hands, and harden them in the Fire; which I remember, when I was a Boy, I often did. And besides this Boys play, no other is known unto me.

B. Very good, you have hit the nail on the head: And now let us see, whether or no the ancient Philosophers have (after the manner of Boys) played with small Bowls, or Knickers? and whether, or no, they have boyl'd their work in Pots, with as easie a Labour, as Women do. For of necessity they must have hit on doing after this wise, else could they not have compared their work to the Labour of Women, and play of Children. So then, if we are to imitate Women and Boys in our Operation, what Matters are we to make use of, for our boyling, in the stead of Flesh, Fish, and other Meats; and what Water is it, that is to be poured thereupon. For if we are minded to do any good effect, 'tis expedient, that we likewise know, what those Matters are, which admit of being boyled unto a Maturity in our fiery Water, and these verily must be such, (seeing they are to be *maturated by boyling*) as have a great Affinity with the said Water: Forasmuch therefore, as our Water is of a *Metallick* Nature, and yet all the Metals do in a

manner arise, or proceed (in the Earth) therefrom, and are even at this very day advanced, by the very same (by the help of the Terrestrial and Central fire) by little and little unto perfection: All that we have to do is, to imitate the simplicity of Nature, which will never seduce us, for so without question, those most ancient Philosophers did do, who having borrowed their wonderful Work from Nature her self, do advise us to do no more, but to follow Nature, and to begin there, where Nature left off, and to ascend higher and to make that perfect, which is as yet imperfect: God hath prefixed unto Nature her bounds, which she cannot transgress [or go beyond:] But Art, doth much excel Nature, and performs those things which Nature cannot accomplish: Yea more, that which she can hardly do in the Earth in a thousand years time, Art effects in one year, and this is easily confirmed by many Testimonies. Now as to the Generation and Maturation of the Metals, Nature useth a most simple or plain way, a very slow one, but yet safe. From thence ariseth the Errour of many a Man, who do not follow Nature, but the guidance of their own phantastick Brains, never effecting ought of good, but remain always Novellists in the same, what Labours soever they undertake, and what Expences soever they are at: Although the ancient Philosophers do by their many Admonitions set afore us, that most simple Course of Nature for us to imitate; and they have especially hinted to us, that their Work is so simple, that should they but openly and clearly have treated of the same, even the Women would deride it and say, that the Male kind had learned their Art from them. Yea, it is so very vile a Work, that no Body would be able to believe it, and upon this Account, the Philosophers have done their utmost, to hide and obscure the Art the most

they could, least they should be contemned by the proud deriders, (who Soaring aloft seek after things too high for them,) and be accounted for Cheats and false Writers. And this is the main and chiefest Reason, why this Art being so wrapt up in darkness of a most profound Silence, lyes hitherto hid from the whole Troop of Sophisters, and such deriding Fellows. *Sendivow* (as we have already several times hinted) doth expresly say, that he had oftentimes declared the whole Art, to not a few word for word, unto whom, that Art did nevertheless seem so very vile and mean, that they could not at all believe any likelihood of Truth in his most true words, and so left the Work unattempted. The same *Sendivow* doth also say, That had the most skilful *Hermes*, the most quick witted *Geber*, and most illuminated *Lully* been again alive, and beheld our Laboratories stored with so many, and such various Instruments of Glass, Earth, Iron, and other Matters, and such several Fornaces, they would be ravished into a most high Admiration, like so many Boys, and would be but as it were our Scholars, as concerning those Vessels and Fornaces, all which however, we have learned from their Writings, but yet we are destitute of that most excellent Work which was wrought by them in so simple a Way, and it hitherto flies our subtile and acute Wits. And, my dear Friend, he also tells us, that we should fly aloft into the lofty Air with our Wings, for the Work is simple, vile and abject, the which, you may sooner comprehend [or feel] with your hands, than apprehend by the subtilty of your Wit or Cogitations.

C. *All these things may very sufficiently serve to rid us out of so great a Labyrinth, but I pray, Sir, how comes it about, that we do sottishly persuade our selves, that those things are so very difficult, which notwithstanding*

are so very simple, vile, and abject.

B. It is indeed, to him that has knowledge of the same, an easie, vile, and simple thing: But very difficult and intricate to him, that laying aside the way of Nature, thinks himself able to learn so great an Art out of Books, which (by their leave) though, seems a thing almost impossible to be done. For the Philosophers have so prolixly, intricately, and obscurely described the whole Mystery, that their so prolix and dark Writings would sooner lead a Man from the true and right way, so far off are they from reducing him thereinto.

C. *I my self find, that this is most certainly true, for I never heard as yet of any Man, or read of any, that learned the Art out of Books: But that almost all of them who were skilled in the same, do Confess, that they became Masters of the same, either by Divine Inspiration or Revelation, or by the help of some Friend. There's no Body can contradict those things which you have here induced, for the Confirmation of your Opinion. And now, Sir, let us set upon the Work it self, and diligently pray unto God and wait for his Blessing.*

B. Content, hearken therefore attentively.

C. *So I do.*

B. Did you never find in the reading of the Philosophers, that all the imperfect Metals may in a *Particular* way be promoted to the perfect Maturity of Gold or Silver, by their dry Water which wetteth not the hands: But being not content with this effect, they have promoted the first *Ens* of Metals (by the help of their occult, fiery, and ripening Water) to a more than perfect Constancy, and Fixity in the Fire, and have concentrated it to the form of Gold.

C. *I remember, that I have read of such things as*

these, though by reason of my unskilfulness and ignorance, I could not understand the least Particle of their meaning: For I am altogether ignorant of that kind of wonderful, and yet, to every Body well known Water: And so shall still remain until it be shewn (and pointed at) with the Fingers.

B. Look here, here's a piece of admirable Water which is every where in all places easie to be found, yea, in the poorest Country-mens Houses, nor doth it deny any Man, the Possession and having it.

C. *Who would ever have believed, or thought, that there was any good hidden in so vile and abject a Body?*

B. [I wonder] wherefore [it is] that no Body can think of this Matter, seeing it is evident, that in our Water the first Entities of all the Metals are abundantly hidden, as in their own proper Seed, out of which they are generated in the Earth, and ripened unto perfection. Those first Entities are but extracted out of this our Water, by [peculiar] Magnets. And now, like as every Metal hath its own Magnet, even so every one [of them] hath its proper Magnet, by which it is concentrated into a narrow Room. I will declare unto you the Truth of this business, by an example taken from the Metals. If you have a Water fully impregnated with Copper, and you desire to have Copper out of the said Water, you will easily bring this to pass, if you shall but put in to that Water, which holds in it the Copper, a piece of clean Iron, the which Iron, (as being the true Magnet of the Copper,) will attract unto it self, all the invisible Copper out of the Water, and gather it into a visible and palpable Metal. If Silver be dissolv'd in any Water and made invisible, and you would again have it, put into the Solution a Plate of pure [or clean] Copper, which (after a Magnetick

manner) will gather together [or draw out] all the Silver in his own [Silvery] Body, and make it visible and palpable. Now when Gold is dissolved in some Water, and largely dispersed, [as I may say] and you would again have it [in the form of Gold;] then put in some ☿ or *Ar. vive* in that Water, and boyl it a little therewithal, (as was done above, with the Copper and Silver) and you shall presently see all the Gold to be attracted, and gathered together by the *Mercury*, insomuch that there will not remain ought of the Gold in the Water, because it follows the Attraction of its own Magnet, *Mercury*. These *Metallick* and *Magnetick* Operations, are a sufficiently manifest Information unto us, and do point out unto us (as with a Finger) the way, of the extracting, not only good Metals in a *Particular* manner, but also far better things than Metals, (*viz.* the Tincture, or form of Gold) out of our stinking Water, in an *Universal* way, by such Magnets, as are fit and apt in Nature for this Extraction. Another similitude we have from the Earth, and Rain water, with which the Fruits of the Earth are moistned: Put you in such an Earth moistned with that Water, as many Seeds as you please; each of them, will (by its *Magnetick* Virtue) attract unto its self, its own like, for its Multiplication, and will leave to the other Seeds, to attract each of them its like also. If now, by this similitude, the Scope or end I aim at, may be made manifest unto you, there is yet hopes you may be holpen: If not, I do not see, by what means you can be succoured, forasmuch as it would be too tedious here to use many other Circumstances. For when we are certainly assured, that the first *Ens*, or the very Form of Gold is plentifully hidden in our Water, we do by very good right seek after that best part, *viz.* the form of Gold, and leave the other first Entities of

the rest of the Metals, in the Water. And now Ile shew thee another similitude: Dissolve in one and the same Water, ☉, ♀, ♂, ♃, ☿, that so you may have all these Metals commixt together in the same: If now you desire to extract the best of them, *viz.* the Gold there out of, what hurt will the other bring you, if they remain in the Water. Such therefore as the Magnet is, which you put into that same Water, such is the Metal too, that you shall extract. If therefore we particularly seek ☉ and ☽ in our Water, it will be expedient, that we put unto this spiritual ☉ and ☽ their proper Magnet, unto which Magnets, they (being precipitated) do stick on, and are by little and little fixed [on thereunto.] And now if we seek after something better than ☉ and ☽, *viz.* the form and Tincture of Gold, it will be necessity, that we also apply such a [suitable] Magnet, which may draw out nothing else but the Tincture or Form of Gold, which being precipitated [thereout of] may be fixed. And thus have I here told you all those things that are necessary to be known. If you are minded to extract in a *Particular* way, *Sol* and *Lune* out of the Universal Mineral water, you must then put unto them their Magnet, *viz.* an *Amalgama* of Copper, and *Argent vive*: For the Copper draws to it self the spiritual Silver, and the ☿ the spiritual Gold, out of the said Water, and brings it unto a Fixation [or Corporeity] with it self, [or, as it self is.] But if you are minded, or desirous, of getting some better thing, than the Gold it self, or Silver, is, *viz.* a Tincture, you must then needs adjoyn thereto its own peculiar Magnet, for, without it, you cannot effect any thing at all: But that you may know, what the true Magnet of the Tincture is, I say unto you, *That is the Compeere, or Companion of our Water, and not of the Metals*: For like seeks its like, as the Philosophers say, Nature

rejoyceth with Nature, Nature overcomes Nature, Nature retains Nature: More than these things I have told you, it is not needful for you to know: Consider therefore very accurately what I have said, and beg of God by your Prayers a blessing, which if you do, you shall not err, but yet you will not be all of a sudden Master of what you desire. All these things have their determinate times, like as a Grain of Wheat Sown in the Earth, the which requires a time to ripen in, nor doth it wax ripe afore the time appointed for Maturation be come about. Follow you the Advice left by *Geber*, and do not hasten on your Work, by any the least hasty speed: For he tells us expresly, that all hastning in our Work is of the Devil. And as concerning what is to be known, and what a one the Student of so noble an Art ought to be, you will find described in the Fifth Part of my *Spagyrical Pharmacopœa*. And what think you now? Can you thoroughly understand me?

C. *Yes, Verily, I do well enough understand those things which I have hitherto heard from you, But yet this Womens work, which you began a Declaration of, is not sufficiently clear unto me, nor is that Boys-play, which is done with small Bowls or Knickers, I do not thoroughly understand that neither,* viz. *how it may be compared with the work of the Philosophers. Were but these things made clear and evident unto me, I would Ranck my self amongst the number of the Masters of the Art.*

B. Well then, come let us go on and see, by what means the Philosophers are wont to make their little Bowls. [Note!] Like as the Boys make use of Earth and Water, for the making of their Pellets or Knickers: So likewise will we use our Earth, and our Water to the making of our small Bowls or Pellets: Ours, I say, not the vulgar and common Earth and

Water, for they are unprofitable as to our Work. But tis indifferent, and all one, whether we take Yellow, Red, or white Earth, because all of them are of one and the same Nature. According to the Colour of the Earth which we use, will the Colour of the small Balls we make, be: We have here at hand a threefold Earth, a yellow Earth of Gold, a white of Silver and a Red of Copper. This threefold Earth will we moisten with our Water or *Mercury*, and so make up a Paste or Mass of the two, which the *Chymists* call an *Amalgama*. This Paste will we wash with pure Water, grinding it so long 'twixt our Fingers, till there be to appearance of any father impurity, and that it admits of being easily washt, or broken with the Fingers. Being thus well washt, we will put it in a Skin, or Cotton, and tye it firmly in; out of which, we will squeez forth all the ☿ with our hands, and separate it from the said Earth, just in such a manner as *Argent vive* is separated in *Amalgamations*, or *Metalick* Masses. The *Mercury* being separated, we will take out our thick *Amalgama*, and make small Bowls, or Knickers thereof, and of almost the same bigness, that the Boys Knickers are of. These Bowls we will expose to the Air, for about some twenty four hours, and by this time they will be grown so hard, as to resemble Stones, in hardness. And now, being thus made ready for boyling, we will put them into our Water to seeth: But yet in the seething, there must be an accurate regard had to some skilful handling the Matter, if you would have it perform its Operation without Errour. This Art will I faithfully open unto thee, lest you err, and so bring damage upon your self: These Pellets, or little Bowls thus made of our Mass, are not to be thrown into the Pot filled with Water, afore the said Water boyls: Which boyling, you must throw them in one after another, and they

will presently harden themselves, and cover themselves over with an hard Crustiness or Skin by which they will be prevented from sticking to one another, and from coming altogether into one Mass. For if you first of all put your little Balls into the Pot, and then afterwards pour cold Water upon them, and so set them on the Fire, that they may be boyled unto their Maturity, you will spoil your whole work. For before the Water in the Pot be hot, all the Pellets being dissolved, would run together in one Mass, and so would not admit the Humefying, or moistning of their inside Parts, and so you would turn all your Pellets by your seething into a mere Pouse or Pottage, whereas they should remain whole in all their Parts, as well internal, as external, for fear of drawing the Water in. But that you may have an accurate Account of all these things which I have said unto you, I hope you will set about the Work, [or thus,] I hope you will do your best, heedfully to regard all these things which I have said unto you and I suppose, that you have sufficiently understood the things which I have already spoken: But if so be, you do not yet apprehend the meaning of these things, I will Counsel you, by what means you may learn this Operation at home from your Wife. When you are come home, bid your Wife to make you some little Balls, or Dumplins with Flower and Veal. And heedfully observe, what Course she takes, about making such Balls, that so you may by the same way learn to deal with your *Metallick* Pellets. First of all, you shall see, that she puts some pure Flower into a deep Dish or Platter, and having put it in, she works it into a Paste, or Mass with Cream, or the purest Milk. Then she admixeth some green Herbs smally minced, and some Spice medled among, and sprinkling some Salt thereupon, she mixeth them

with the Paste made as aforesaid, to give it the sweeter Smell, and Taste. Of this Paste, she will afterwards make little Balls, of what bigness she pleaseth, which Balls she does not put in the Water afore it boyls. When therefore the Water seeths, she throws in, one Ball after another, each of which, as soon as ever it feels the fervent heat of the boyling Water, will presently cover it self over with a Skin, whereby they will be kept from sticking one to another, and running into one Mass, and returning into such a Paste as they were in, before their being made up into Pellets: Whereas, now each of them may be kept in its own Form, and be encompassed all round with the Water, and be advanced unto a Maturity, or readiness, by a due seething: And now, when you have seen this Operation of your Wives Cookery, I do not question, but that you will be well enough skilled in this Cooking Art.

C. *My dearest Friend, I do friendly request you not to take it amiss, in that I cannot abstain any longer from down right laughing, when I hear that our work hath such a corresponding likeness, with the Art of Cookery: Your so faithful Instructions have already abundantly satisfied me: I have very often seen my Wife busied about the Cooking of such Balls, and my self have also delightfully fed upon these kind of Dumplins, made both of Veal, Eggs, and Spices, and also of Flower, Milk, and green Herbs. But I fear me, that when my Wife shall see me making these Balls or Pellets, and boyling them in a little Pot, she will laugh at me, and say, that I learned my Skil from her.*

B. 'Tis no Matter, you have no reason to regard either the tatling of your Wife, or of all Men whatever: For they know not what they do, it is enough for you, that your self know what end it is,

you do any thing for: Think you, that if other Wiselings and Know-littles should see you working with such little Balls, they would not deride and mock you. But don't you at all mind their unprofitable Prating, leave the shril-sounding Geese to their own loud Chatling, and follow you my Doctrine, and wrap up this our Cookery Art in the darkness of Silence: Which if you do, you need not fear of being mockt, or laught at by either Women, or Womanish Men.

C. *I have now (praised be God) learned enough: But yet, there is one thing I am ignorant of, and that is this, by what sign I may come to know, when my Pellets are well enough boyled, and what Fire they are to be boyled in. The Fire of Wood and Coals, I know is used by the feminine Sex for to boyl withal, but whether or no, the same be necessary and conducive to our Operation, I request you to inform me.*

B. Have you never seen, what proof Women have to know, when their Dumplings are well boyled? They are wont to take one out, and cut it in twain, that they may see, whether or no the inside, as well as the outside of the same be so well seethed, as that the Flower is not any more tenacious or Clammy: Do you even the same, and sometimes put a piece of one of your Pellets you take out, in the *Cineritium* or *Cupel*, and that will shew unto you, how much increase of *Sol* and *Lune* hath particularly added its self to your Balls, in that time of the boyling, and how long they are, as yet, to be boyled. Now you know, that all these things are to be searcht into, by your own Meditation and Tryal, because it can not possibly be, that all things can be so very clearly set afore ones Eyes, as to need no farther meditating thereupon, and inquisition thereinto. After this

manner may you boyl in one Pot, with one and the same Water, two, three, or more little Bowls, of different kinds, as, some made of Flower, green Herbs, Spices, Flesh, Eggs, Fish, and other things, and so, after the seething of them, you make take forth one kind after another, and *Particularly* apply them to your Use. For these things are to be understood concerning *Particulars*. But if you have a mind desirous after the *Universal* Medicine, then must you enter upon a certain way of almost an whole entire year, which is necessarily requisite to the finishing of its Operation. For our Magnet, whose Task it is to extract the *Form* of the Gold out of our Waters, doth as yet groan under its immaturity, and therefore needs no small space of time, for the extracting the *Tincture* out of our fugacious and combustible Waters, and fixing it with it self.

C. *These Words of yours, by which you mention so long a time, do not a little affrighten me. Our Wives can boyl their Dumplins enough in one hours space; what will such a continued boyling cost? I would be glad to redeem it, [or, to be excused] for the price of two Golden pieces of Money [or Duckets.]*

B. I should tell you, that you are of the Off-spring of unbelieving *Thomas*, for you heap upon your self, by your needless incredulity, such heaps and Loads of Cares. Don't you remember, that I told you at first, that the Charges of the whole work, from the beginning to the very end, do not exceed two Golden pieces of Money, which they call Duckets. And that I do not at all tell you an untruth, I will expound it unto you by an evident Demonstration. When you shall heat your well covered Pot, that so your Water may not vanish away in fume, with the small fire of a Lamp, how much I pray will such a Labour cost

you? Put Case, that some Pounds of water cost you some *Asses* or *Stivers*, and the Magnet doth also cost you some *Stivers*, [ten *Asses* are a *Roman* Peny, which is Seven pence half Peny of our Money] and now how many Pounds of Oyl will there need to nourish that so little a Fire? And though you should spend forty, fifty, or more Pounds of Oyl, may not you well say, that you shall finish the whole work, for the Charge of two Golden Duckets. Well! what say you? Are you yet Content?

C. *You do now again somewhat encourage my mind, which had almost fainted, by telling me, that the Matters necessary for our Work are sold at so mean a Price. But there's one thing still that doth not a little trouble me, and that is, that so much time is required to the Fixation. All the other things are as well as I could wish: But, I would fain have had that shorter work of three hours, or seven days.*

B. O thou Dreamer, what have I to do with thee? What? doth that space of time, wherein such excellent and most profitable Fruits are to be hoped for by thee, seem too long? What dost thou think to get without length of time? Good things are not wont to offer themselves without Process of time, as the common Proverb tells us. Mean while you may follow your Vocation, nor needs there any other Labour, than that you look to your Lamp Morning and Evening, and see how the Fire is. And I pray, are not the Country men constrained to wait their time, wherein to reap, and again to receive the Fruits which they committed to the Earth? And though they have sown their Seeds afore the approach of the Winter, yet they cannot reap them again from the Earth, sooner than the next following *August*, which then rewards and recompenseth all their hard

Labours. But now, the waiting so long a time does not tire them; for they patiently expect the time of Harvest. Thus likewise are you to do, but if you are greedily desirous of sooner making ready your Pellets, or Balls, by the boyling, you may I Confess, have a sooner ending of your expectation, and that on this wise, *viz.* by a stronger Fire, which may make your Water boyl without any ceasing, but yet in this same way of Operating there doth again happen this trouble, from that strong and uncessant seething, *viz.* that your Water being without any intermission resolved into Fume and Vapour, is always lessened, and you must of necessity be always pouring in more new. Use which of these two ways you please, for you are e'en importunate and troublesome enough unto me. I will not, for the time to come, take on me to instruct any more such Disciples as you are. What do you think, that if that short work of three days, or of seven hours were known unto me, I would presently reveal it unto you? No! But yet I am not gotten to so high a Degree of knowledge, as to profess my self a Master of so great an Art. I do believe though, that such things are possible to be done, but I deny, that I my self am able to do such notable things. And now, go home, in God's Name, and diligently and seriously meditate upon all these things: You have heard enough, and my time will no longer permit me to confer with you. If perhaps, one or two Errours should put a stop to your proceedings, you may again come unto me, and ask me thereabouts. Mean while I commend you unto God, and pray him to bestow his Blessing upon your self, and your Labours.

C. *Now am I contented, not know what farther I should ask: I am sorry, that I have so much troubled you by my dull Brains, and beetle Head, and been so*

importunate: Nor know I, how to requite your deserts, God will reward you with Life eternal, I shall go home full of joy, and bear a glad Message, and Tidings unto my Family. And I pray God to be at all times present with us, to our Help and Succour.

B. Amen.

The COROLLARY.

I have, in this Third Dialogue, made mention of a certain secret fiery Water, which can ripen the Volatile and immature Minerals, and Metals: And herein I have principally regarded a *Particular* Transmutation. But forasmuch as a *Particular* Melioration of the Metals requires as much time, and no fewer Expences, than the *Universal* it self does, I would here commend to the Sons of Art the *Universal* work, which is to be preferred before a *Particular* one. Such things as we have perhaps omitted in this Dialogue, the Description of my fourth Secret Fire will sufficiently supply the defect; to which, I refer the friendly Reader. He will there see and understand, that the greatest part of the whole Work, and the very hinge of the said Operation, consists chiefly in the true Vessel, in which our Matter is to be ripened; and without the knowledge of which, there can never be any thing done to purpose. Which Vessel, seeing that all the Philosophers have covered over, and hidden with so great a Care and Diligence, and have involved it with such obscure Clouds of darkness, I should do amiss, yea, most extreamly amiss, should I lay it open, and bring it from out of those dark inwrapments, into the Light. Thus much only I say, that it ought to be such a Fornace, and the Vessel it self such a one too, as in which, all the

Chymical Operations, *viz.* Solution, Putrefaction, Distillation, Sublimation, Cohobation, Ascension, Descension, Circulation, Inceration, and Fixation may be perfectly shewn unto an *Hermetick* Disciple, or Learner, in one hours time, in one little Fornace, in one Glass, and in one Fire, all which must not cost more than the value of one quarter part of a Doller, and is all done without any changing of the Glasses, or putting to, of the hands of the Operator. These are indeed such things as exceed all the belief of the whole World, but yet they do not exceed Glauber's faith, nor sufficeth it him only to believe, but he can also effect the same, that so other incredulous people may believe likewise.

N. B. On a certain time, as I was familiarly discoursing with a learned Man, concerning such great and incredible things, he presented me with these following Verses, aptly agreeing to this Matter in hand.

Thy **John.** * Sirname* (Glauber!) *given was, as, unto* Faith*, relating*
Yet by good right it should have squar'd unto thy Operating.
Faith's Objects are invisible, but yet, such things, do you,
As would at first be scarce believ'd, produce by Art to view.

A Short Exposition upon the Hellish Goddess PROSERPINA*, the Wife of* Pluto*,* viz. *what the Heathenish Philosophick Poets, as* Ovid *and* Virgil *understood by it.*

And how, by the help of this Proserpina*, the* Animæ*, or Souls, of the Mortified* Metallick *Bodies are carried out of the Chymical Hell into the Philosophick Heaven. Translated out of the* High-Dutch.

Reader, that we may see, if and how the inferiour Metals, by true Art, may be transmuted into good and constant Gold and Silver: I find, that it is first necessary to declare whence, and by what means the Melioration of the imperfect Metals must proceed by Art, and by what means only by Nature, without the hand of the Artist, the clean and fixed Gold and Silver hath arrived to such a Purity, and Perfection.

It being then, that this knowledge is the only Foundation, upon which *Alchymy* is built, I find it

necessary to discover it to those, who are ignorant of it, and to shew a sure way, in which they may go without hinderance, and happily arrive to the desired End.

The Reason, why Nature generates all Metals in the Mountains, and brings some of them to Perfection, and leaves others imperfect, several Philosophers of our Ancestors have very plainly described, and therefore needs not here to be repeated. He that knows it not may enquire after it, in the Writings of these Philosophers, where he may learn their Grounds, or Reasons, only this little I think necessary here to shew, *viz.* that all Metals and Minerals have but one Original, or beginning, to wit, the four Elements, Fire, Air, Earth and Water. But that one Metal in the Earth, in which is its Matrix, becomes to be more noble than another, this is but accidental, according as one Metal by the Central Fire is more, or less cocted, and chiefly from thence, according as the Universal Spirit of the World, or first Matter of Metals, lights of a Matrix in the Earth, more clean or unclean. But passing this by, because the Books of Philosophers are filled with them, although observed by a very small number of Men. For almost all who read Chymical Books, read only to the end, that they may see those Processes, which teach how to make Gold and Silver out of the inferiour Metals, but do not at all mind the Original, and difference of Metals, although that ought to be the first, for where the Philosophers write of the Generation and difference of Metals, there they publish the whole Ground of *Alchymy*: But where they write their *Receipts*, and *Processes*, their they obscure the Art, and lead the easie Believers into Errour. Among all the Philosophers, I have found none which hath dealt more plainly and openly in

this Matter, than *Paracelsus* in his *Heaven of Philosophers*, who writes, that every Metal is an hider or concealer of the other Six, or that every visible Metal contains in it self invisibly and spiritually the other six Metals, and that to bring forth and make visible, the invisible, and more noble Metal, and on the contrary, to transplant the visible and ignobler Metal in the same place, where the more noble and invisible was, is very possible, which is indeed the very Truth. For I my self have perform'd this Transplantation, not only once, but some hundred times. If any hath a mind to perform any notable thing in *Alchymy*, he can find no Book, which will teach him more than the Book above cited. But yet I will not despise the Books of other good Writers. And if this were not true, that every visible Metal hides in it self the others, invisibly, how could it be possible to transmute any inferiour Metal, either universally or particularly, into good and constant Gold? But that it is possible, daily ocular inspection proves to be true, in several places of the World. Now if this be so, as no man needs to doubt it, it will not be difficult to teach any understanding Man, if he will but learn a little how to handle the Fire, how to bring forth fixed and corporeal Gold, out of those gross and visible Metals, in which lyes hidden a great deal of pure and spiritual Gold. But yet you must know, that one clean Metal hath more invisible and spiritual Gold in it, than another. *Jupiter* hath in it much spiritual Gold, but *Venus* more, and *Mars* the most: Yet *Antimony* doth not give place to *Mars*, for the quantity of spiritual Gold. Now whosoever is minded to undertake this sort of Labour with Profit, let him take care what Metal he handles, and how he handles it, that instead of Profit, he may not reap discouragement and damage, but may have reason to

thank God, Nature and Art; in which, this following Process will sufficiently help him, in which, the true and most certain way is openly shewn. Yet with this Proviso, that he so lives, that God may be pleased with his Conversation, and not have it in Abomination. For Gods blessing is all in all. There must be together earnest Prayers, diligent Consideration, and unwearied Labour, or else one may easily fail, although the Art be plainly and clearly set before his Eyes, without any reserve, which a good Christian ought certainly to believe. Yet I have often heard the contrary, from impious Men, such are the adherents and Consorts of *Farnner*, as if God had nothing to do with such Arts, and that Art alone was Master in these Cases, which certainly is very impious, seeing that such Blasphemies, take away from God his Omnipotency, his Goodness and Mercy, and give them only to Nature, seeing that God hath not his beginning from Nature, but Nature from God. Have not the wise Heathens believed, that God could give his blessing to Mens endeavours, and take it away again at his Pleasure? What saith *Virgil*, that famous Philosopher? when he teacheth hew to pluck the Golden branch from the *Opake* Tree:

Tene manu, facileque sequetur, & uno avulso,
Non deficit alter, si te fata vocant, aliter nullis viribus
Nec duro ferro avellere potes.

One Branch being pluck'd and born away,
Another follows; unless the Fates say nay nay:
Without whose Smile, no force of hardest Steel
To crop the smallest Twig, can ought prevail.

It is said, *Ora & Labora*, Pray and Labour, according to which, let every Man live. Now you

shall hear how the imperfect Metals, in a particular way, may be transmuted with great Profit, into perfect, and that very plainly without any reserve, for I have obtain'd it at length by much Consideration. And because my great Age, and several long Sicknesses keep me continually in Bed, and both Feet are as in the Grave, where I stand certainly expecting nothing else, but a happy departure out of this transitory Life, into a better, which passeth not away. So that I would by no means intermit to sing with the *Swan* before my end, a pleasant Song; which may rejoyce all the Lovers of *Alchymy*, if they will make themselves sharers of this Melody. For those who read what I here write, and yet give no Credit to it, nor put their hand to the Work, and finish it with diligence, they will reap no Profit by this my instruction. But those who understand my Writing, and work plainly after the Letter, provided they have but a little understanding in the Fire, will reap great Profit; yea, even great Riches by it. For I am plain without any reserve, so that if any should fail, the fault will not be mine, but must be imputed to the Workmans want of Skil; for I never in my Life sought to gain any thing by my Writing, neither will I now do it, but it sufficeth me if I do good to my Neighbour, out of Love, with that Talent which God hath given me. Whosoever is on *Glauber*'s side, and will participate of my good intention, he may, or let it alone, 'tis all one to me, for they are not all good Cooks that wear long Knives; the Art consisteth in Experience, and he that is but any thing skilled in Chymical Operations will do well enough, for all is laid plainly down before his Eyes. But on the contrary, the Covetous, Proud, and Lazy, who seek to be rich without labour and pains, will find every thing dark, and never attain to

any thing profitable. For God will have it so, that not every Body shall be Rich, as *Paracelsus* very well expresseth it in his Book of *Sulphur*, when he saith, *Many might be helped with a few Words, if it was not against the Will of God, for God will not have the* Goats-*tail equal the* Cows *in length, for else out of Pride he might with it beat out his own Eyes, and therefore it is better to be silent, that they may remain Poor*. Thus *Paracelsus*. But I *Glauber* say, that it is better to lay down the Art in truth, without difference before all Men, for God keeps still his hand over it, and to whom he Wills it, he will give it, and to whom he will not give it, he knoweth how to cast a Mist before his Eyes, that he may not see the good, nor have power to apprehend it, but may wander about in darkness, with his proud and dull Head, till at length he fall into the Pit of the impious, and there perish without help. But that I may no longer detain the Lover of Art with my Discourses, but come at length to the Practice, I will in the Name of God here set down the whole Process as it is in it self, without any Reservation, and the whole business is thus.

Now followeth the true, and often practised Process, how to transmute Silver (as being yet not a perfectly mature Metal) by degrees, without any loss, totally into the highest perfection, that is to say, into good Gold abiding all Tryals. After the revealing of this Process, we shall also hear, how all the imperfect Metals, *viz.* ♄, ♃, ♂, and ☿ may after the same manner (but yet not totally, but only so far as they contain an incombustible *Mercury*,) be transmuted into good Gold and Silver. And after this Revelation, we will not omit to shew also, which way ☿ the most immature of all the Metals, may be transmuted, not only Particularly, but also Universally, into the highest Medicine, and the best Gold. But the later

must thus be understood, that we may not cast Pearl before Swine, but that they may remain only among honest hearts, and not come into the hands of double-minded Men.

But now, to come to the Melioration of Silver, the ingenious must know, that Silver is naturally fixed in the Earth, and endures the fire, and therefore needs no Art to fix it; for it bears the Tryal of the Test, as well as Gold, wanting only Colour and Weight, which Nature hath not bestowed upon it, but may be procured by Art. As for the Colour, the secret Fire of the Wise can only make it perfect, for all Colours are absconded in the common Fire of Wood, and the Sun, as we daily see, that the Universally ripening Sun, brings all the Fruits of the Earth, from a Green and White, by its constant Beams, to Redness and Maturity. And we also see, that the common Fire, of Wood and Coals, makes Earths and Minerals which are White, become Red, as we see *Crocus Martis*, *Minium*, and other Colours which are produced out of Black, Gray, and White Metals and Minerals; as the highly illuminated *Paracelsus* hath sufficiently taught us, *viz.* that the common fire of Coals, by its own power and innate Nature, without any addition of other things, is perfectly able to graduate the white Metals, into Red, or yellow Gold, as you may see in his *Book of Cements*. If the common Wood-fire of it self doth this, what cannot the Fire of the wise effect, which was always kept in the greatest Secrecy? Especially, if one know how to add a graduating *Metallick* Species, as *Mars*, *Venus*, and *Antimony*, and the like, after a spiritual manner, to the secret Fire; which is the way to give to white Silver, a constant Redness.

As for the weight of Silver, it may, in like manner

as the Colour be given to Silver by Art, so that it shall be equal with Gold in weight: Which introduction of Colour and weight into ☽, the Philosophers have called closing of its Pores. For this is certain, that if any light Metals are melted together, that one filleth up the Pores of the other, and both come out of the Fire more compact and heavy, than they were before. For example: Take half an Ounce of Red Copper, and as much of good Tin, melt these together, and pour them out into a Bullet-mould, and you will see, that they will not be much more in Magnitude than one of them was before; for one Bullet of ♀ and one of ♃ may almost be put into the same Mould: From whence it appears, that one Metal hath an ingress into the other, and mends, and augments it in its weight and Colour; but what those Metals are which give weight and colour to Silver, you may easily guess. Nothing can tinge, but what is naturally Coloured, and nothing can better give weight, than what is naturally heavy: In which, ☿ and ♄ have the Preheminency, but in introducing Colour, *Mars*, *Venus*, and *Antimony* excel. But which way this introduction of colour and weight, into light and white Silver, is to be done, the following Process will teach.

But this the Ingenious ought to know, that it is no Art at all, that if the Iron made Red, and ☿ and ♄ made White, be mixed with ☽, yet they will not render it durable, red and heavy: But the Corroding ♄ will quite take away the Redness and Whiteness upon the *Cupel*: For what is not purged from all combustible *Sulphur*, cannot Sustain the *Cupel*, but will vanish with *Saturn*, and turn into *Scoriæ*: And seeing that we know, that ♂ and ☿ contain abundance of superfluous combustible *Sulphur*, and also that their incombustible *Sulphur* is not yet fixed

enough, to refill the Corroding ♄ upon the *Cupel*, and therefore with him must vanish and come to nothing, for all that is able to abide the *Cupel* must be separated from all combustible *Sulphur*. Now we know, that ♂ and ☿ are not so, and therefore cannot abide the *Cupel*. For ♂ if he be made Red, and cast upon Silver, he doth not remain Red with it, but so much as enters the Silver, again becomes black Iron, and therefore can give no Colour to the Silver; and also ☿ flies away, and so leaves no weight to the Silver: Which *Paracelsus* hath sufficiently described in his *Cœlum Philosophorum*. So that if one melt unfixed Metals with Gold and Silver, and keep them together never so long in the Fire, yet notwithstanding the unfixed Metals, cannot be made fixed by the Gold and Silver, but every of them would again be found in the *Examen*, as they were before. But if one Metal should make the other better, they ought to be spiritually conjoyned, and so the Spirit of one Metal will improve the other. For all Philosophers testifie, that the Metals must first be reduced to their first Matter, that is, they must be brought into a spiritual being, before they can be transmuted into more Noble, by Art. But which way all Metals are to be spiritualized, and brought to their first Matter, is taught in my Treatise of the *Three Principles of Metals*, lately published, as also in the Seventh part of my *Pharmacopœa Spagyrica*, and its Appendix. Now if one would Meliorate, or improve, the imperfect Metals, the imperfect combustible *Sulphur* must first be Separated from them, that only the purest and incombustible part, *viz.* the incombustible *Sulphur* may remain; which may be done by several ways; as by Distillation, and Rectification, and also by Adustion, and Combustion, in which nothing perisheth, but the combustible and

unprofitable part: But the incombustible Oyl still remains, and doth not perish by the Fire; and also by Solutions, Distillations and Rectifications, all the unprofitable Feces of the Metals are separated, and there remains only the clean Quintessence of the Metals, which are separated and advanced into a concentrated Medicine. This Separation of the unprofitable and combustible *Sulphur*, from the incombustible, as Old Philosopher hath notably expressed in these Verses.

Est impossibile, Sulphur sine Flamma delere,
Calcis adustibile, quod præstat fossa Minerœ.

Sulphur *impure, we can't blot out,*
Till Circling Flames play round about
Our Oars and Calces; for then they
This subtil Fire forthwith obey.

Here the Philosopher tells us, that every combustible *Sulphur*, may be burnt, and reduced into nothing, but no otherwise, than by a kindled and combustible Fire, by whose Flame nothing that is good, but only the superfluous and noxious *Sulphur* by which all the inferiour Metals are destroyed, is taken away. And therefore justly reputed imperfect, as long, and as often, until this unprofitable *Sulphur* is taken away from them, either Particularly, by Dissolving and Coagulating, Distilling and Rectifying, or else by an Universal fixed *Mercury* by projection, by which means the hurtful combustible *Sulphur* is fixed, and, without Combustion, transmuted into a nobler Metal. For this is very possible, that any combustible *Sulphur*, by an easie way and small Charge, and in a short time, *viz.* in one day, Particularly, may be so fixed, and made constant in the Fire, that, without being burnt, it may be able to

endure the strongest Fire, the which is handled more at large, in my *Three Principles of Metals*. From hence it follows, that no imperfect Metal can be transmuted, with Profit, into a Perfect, before it be free'd from its combustible *Sulphur*, which may be done several ways. Now, he who hath a mind to get any good out of the imperfect Metals, must learn how to separate their unprofitable *Sulphur*, either by one means or other, as I have sufficiently taught. For in this, *viz.* in the Separation of the combustible *Sulphur*, from the incombustible, consists the whole Art; which every one ought to attend without other thoughts. Now after we have understood out of this Theory, in what the Melioration of the Metals consists, or how it must be effected, it is necessary to know the exact Practice, or Process, as the Operations succeed one another: For to this work belongs, not only Distillation and Rectification, to separate the pure from the impure, but also the most subtil and clean parts, after they are separated from their Feces, must be made fixed, subtiler, and constant, *viz.*, so constant, that the Corroding ♄, may not overcome them, but against his Will, leave them constant upon the *Cupel*. This is one of the greatest Secrets in *Alchymy*, yet taken notice of but by few, and therefore few there are who reap any Profit. For the greatest part of Operators are persuaded, that if they had but Red Metallick Tinctures, that they could immediately tinge with them, but in the end they have understood, that more than unfixed Tinctures are required. It is an easie Matter, to make Red Tinctures out of Stones and Metals: But these are not permanent on the *Cupel*, without true Fixation, which the Philosophers call Perpetuation in the Fire. Nothing in the World can tinge, so that the tinged Metal can endure the *Cupel*, as long as the Tincture is

still Metallick. For whatsoever is made out of Metals, and by a strong Fire may again be reduced into a Metal, cannot be called a true Tincture, for whatsoever yet contains a combustible *Sulphur*, perisheth upon the *Cupel* with *Saturn*, and nothing abides, but what is totally deprived of that. For even the *Saturn* contains much combustible *Sulphur*, therefore he so readily acts upon Sulphureous Metals, and draws them with himself in to the *Cupel*, which he cannot do to Gold and Silver. But because we also know this, that when by the help of common fixed Gold, a combustible and fugacious *Sulphur* is well united and fixed, that the combustible *Sulphur* adheres so closely to the fixed Gold, that it also remains fixed with it, and can never be separated from it. Now, if the weight and proportion be well adjusted, then the fixed *Sulphur* enters with the Gold into Lune, and Tingeth it into constant Gold. But if the conjunction of the *Sulphur* and Gold, be not well made, or too much of the *Sulphur* be put to the Gold, it takes away the Ingress of the Gold, so that it remains with the *Saturn*, and cannot enter the Silver. It is also to be observed, that if the *Sulphur* of ♂, ♀ or ♄ be legitimately united with ☉, and yet be not kept long enough together, it will produce no good; and therefore the Transmutation of Metals is not so easie a thing, as many imagine; it is not enough to make a Tincture; to fix it, is more; and to give an Ingress, is hardest of all. And these three things ought to be well known, if one would effect any good in the Transmutation of Metals.

Now that we may farther hear, which way Tinctures may be drawn out of the Red Metals, fixed, and made constant in the Fire, and how to give them an Ingress, I have undertaken to Reveal to the Lovers of Art. And none needs to doubt, but what I here

Write are my own Inventions, which I have not only once or twice, but many times experimented, and always found good, although in small quantities, provided no accident hath hindered me. If a Glass break in the labour, or a Crucible runs out, by which one suffers loss, that is not to be accounted a loss, because it comes by accident and not from the Art, and therefore not to be imputed to the Art. If an Art be never so well described, and an Unskilful Workman intermeddle with it, the Work may be easily spoiled, and therefore the fault cannot justly be charged upon the Art, as it is too often done. I shall here acquit my self of this unjust charge, if out of a good Intention I here discover the Art, as I have often done, without concealing any Manual Operation, and hereafter shall not care what Ill Men say or judge of it, if any one, through his want of Skill, should lose his labour. I here Write nothing, but what I have often done my self, and found good; for what should move me to publish any false thing, that might seduce others to labour in vain, even when I am ready to dye? I never sought any Profit by any of my Writings, no, not when I was young, and might have occasion for it. And now, when both my Feet are in a manner in the Grave, and I am certain not to live much longer, although I am heart-whole, nor find I any dolour about me, yet my Limbs being weak, I am forced to keep in my Bed, where I Write this. I say, Why should I, so near my end, write any thing hurtful to my Soul? I write this for my farewel, to do good to the World, even as the Swan, when she is near her death, sings a pleasant Song, and such I would that every one should take these my last Writings to be. But if it shall please God, I hope this will not be the last; which is only a small Work, to shew the probability and verity of the Transmutation

of Metals, and to help Skilful Chymists to great Riches. But if God shall yet spare my Life, I shall write of higher matters, and shew such a light to the blind World, as hath not yet been revealed by any Man. In the mean time, I desire the Ingenious very well to consider this particular, and to try his Fortune, every thing is easie to be done, and needs no beating of the Brain, for all the labour is clearly laid down, without any reserve, therefore I would have none be so arrogant, as to impute the fault to me, if he miss his Intention, but rather to himself, through his own unskilfulness or negligence. Yet this is also to be considered, That sometimes a true skilful and diligent Operator cannot imitate an easie thing, being hindered by the Almighty, who for certain Reasons keeps his Hand over it, and will not let every Man grow Rich.

Now follows the Fundamental Process, how to make good Gold out if Silver, with profit, and how to separate, after a particular manner, good Gold and Silver, out of Iron, Copper, Tin and Lead.

℞. A pound of Steel Wier, more or less, according as you will begin your Work in a greater or lesser quantity, dissolve it in Spirit of Salt, filter the Dissolution, and abstract the Phlegm from the Solution, in Sand, for in the Abstraction there will come over no acidity, (because the *Mars* holds it after a Magnetick manner) but yet this is not without virtue, for it carries over with it self a very subtle Martial Spirit, of which a little put into ones Mouth, penetrates the Tongue, so that the taste thereof remains long after. And this penetrating taste and smell, is nothing else but the most subtle Narcotick *Sulphur* of *Mars*, which is set at liberty in the Solution, and carried over with the sweet Water, in

the deflegming. It doth wonders in Internal Obstructions; and Externally it easeth all Pains, because it is Narcotick and Stupefactive; It serveth for Physicians and Chyrurgeons in many cases, but because I have already written of this, I need not here repeat it. And this you ought to note, that you draw not off the Phlegm to dryness, but the Solution of ♂ must remain in form of an Oyl. This sweet Oyl of ♂ is the *Opake Tree of Virgil*, from which he hath taught us to pluck its Golden Branches, and how this is to be done, he hath also obscurely hinted, but I here publish it plainly. *Virgil* saith, that those Golden Branches are the gift of *Proserpina*, but what was to be understood by this *Proserpina*, which the Heathens have said to be the Wife of *Pluto*, is not here expressed, but only this, that this Golden Branch was Consecrated to the Goddess *Juno*. He that will have the foundation of those Heathenish Gods, cannot better accomplish his Desire, than by Reading the last Edition of the Dictionary of Eight Languages, written by *Ambrosius Callepine*, for there he will find many curious secrets of the Ancient Poets illustrated. Now concerning *Proserpina*, many Philosophers and Chymists understand the Corrosive Oyl or Butter of *Antimony*, of which I have already made mention, although obscurely, in my Treatise *De Sale Philosophorum*, but shall here give it you more plainly. Now, it according to a due weight, you put some of this *Proserpina* to the Solution of *Mars*, and unite them well together, and then distil this mixture by a Glass Retort well Coated, there first comes over a certain unprofitable Humidity, then a white Oyl of *Antimony*, which is to be kept by it self, and when you see yellow drops begin to fall, you must then change your Receiver, then give a stronger Fire, and the *Proserpina* brings over with it self the Tincture of

Mars, as red as Blood. This Blood-red Oyl of *Mars* and *Antimony* is the Golden Branch, plucked from the obscure Tree, which may easily be fixed into a particular Tincture, as we shall hear anon. Now when you have pulled one Golden Branch, you may also pluck a second and third, for they will easily follow. As for the manner of plucking more such Golden Branches, it is thus: You must dissolve the remaining ♂ with Spirit of Salt, and there will remain many Feces, but the Solution will be clearer and better than the first, although less in quantity: Now, after (as I told you before) you have put to it the due quantity of Butter of *Antimony*, for which purpose that which came over in the first Distillation will well serve, and when you have driven this over by a Retort as before, the *Proserpina* again brings over more of the Tincture in a Blood-red Oyl, which may as the first, be fixed into a Tincture. After this manner you may pluck many Branches, one after another, but it is not convenient, because the Solution of *Mars* is diminished by every Distillation, and at length your Branches would be very small, therefore it is better when you have plucked the first Branch, so go to another Tree, and thereto pluck a Golden Branch, for the Tree is not so precious, and you may collect the Trees from which you have pulled the Branches, and dissolve them in Spirit of Salt, and then pluck from them more Branches. *Proserpina* hath learned this spoiling and bearing away, of her Husband *Pluto*, for he stole *Proserpina* from her Parents, and carried her with him into Hell, and made her his Wife. *N. B. Pluto* carried *Proserpina* into Hell, but *Proserpina* doth the contrary, carrying the dead Bodies and Souls out of Hell. For she hath her Original only from the Spirit and Salt of the World, which Spirit and Salt of the World have

power to carry the Souls of the dead Bodies out of Hell, as you may see in the Books of Philosophers which say.

Sal & Spiritus Mundi, ducunt Anima Mortuorum ex Orco.

The Salt and Spirit of the World, bring the Souls of the Dead out of Hell.

Let this suffice concerning the bringing over the Metallick Souls or Tinctures, which is done by *Proserpina*. But there is yet other ways to draw out the Tinctures of Metals out of Red Bodies, and they are chiefly to be had by means of our secret *Sal Armoniack* in a far greater quantity, than by the help of *Proserpina*, which is somewhat troublesome, but yet these are more easily and perfectly acquired by our Alcahest. Now, after we have heard how to draw Tinctures out of Metals and Minerals by the help of *Proserpina*, it is further necessary to know how to fix those Volatile Tinctures, so that they may not only endure the strongest Fire, to which they may easily be brought, but that is not enough, they must be made so fixed, that the Corroding *Saturn* may not have power to injure them upon the *Cupel*; if that be not done, these Tinctures can profit nothing to Metals. I have seen very many who very well know, how to Extract Tinctures out of *Mars*, *Venus*, *Vitriol* and *Antimony*, but they wanted the Fixation, the perpetuation upon the *Cupel*, and also Ingress, and therefore they could do nothing with them. These following ancient Verses are read by many, but understood by few, *viz.*

Fixum si solves, faciesque volare solutum
& volucrem figes, faciet te vivere tutum.

If thou dissolve that which is fixed, and render it Volatile,
And again fix the Volatile, thou shalt not want.

We have proceeded according to this Verse, in making the fixed Iron Volatile, although we have not yet again rendered the Volatile fixed and constant upon the *Cupel*. The Fixation requires but little Art, so that it may abide the Fire, but to make it abide the *Cupel* is a great Art, and cannot be done by idle talking, but by a fundamental knowledge, without which all is in vain.

Now concerning the Fixation of those Volatile Tinctures, so as to abide the *Cupel*, I have (thanks to God) often experimented, and have already communicated to some who are Curious, out of kindness, whose success I do not yet know. This Fixation cannot be effected without Common Gold, for when Gold in a liquid form according to a due proportion, is mixed and radically conjoyned with the Tincture, and cast into Hell to *Pluto*, and *Pluto* finds his dear Consort deeply in love with the *Anima* of *Mars*, or this Beautiful *Hermaphroditical* Youth, he burns with Jealousie, so that he bends them so close together, as they can never afterwards be parted by *Saturn*. But wheresoever one of these three goeth, draweth the other two with it. And because they are also constantly together, as if it were one Spirit and Tincture united to the fixed Body of Gold, therefore they have an easie admittance into the Chamber of the Queen *Diana*; for *Diana* doth by no means shut out her dearest King *Apollo*, but willingly admits him, and therefore she is recompensed with all the Treasures which he hath received from his true and Warlike Servant, *Mars*: And of this, by *Neptunes* help, she hath made her self a glorious and constant Red

Garment, which neither Water nor Fire, nor the old and envious *Saturn* can spoil her of. Here I have Fundamentally described the Fixation of the Martial and Antimonial Tincture, clearly without any reservation, yet somewhat enigmatically, according to the manner of the Poets. He that doth but a little consider, cannot fail, but must comprehend it, if he hath but a moderate Capacity, except God shall prohibite him.

Now let us further see, what may be further done with our Red Oyl of ♂, and ♁, in Physick and Alchymy. When we powr upon this Oyl our *Alcahest*, and again draw off the Liquor by a Retort with a gentle heat, and at length give a stronger Fire, the most subtle and cleanest part of the Tincture will come over, and the grossest part will remain behind, which is an Universal Purge. The subtle part, may yet be made purer and nobler by Rectification, and this you may afterwards dulcify from its Salt, and dry the *Anima Martis* and *Antimonij*, then put it into a Glass, and with an easie Sand-Fire melt it into a Red Stone, for this Stone melts as easily as Wax, and hath as easie Ingress into all Metals, as Oyl hath into dry Leather. This Stone hath not its equal, for it is better than the Fire-Stone of *Basilius*, it is better than *Butlers* Stone, to which *Helmont* hath ascribed such Wonders. Of this Stone and its incredible Virtues, which it shews in Physick, I shall treat at large in the following Treatise. This Treatise shall Discourse of three unknown Fires, and Stones: First of the secret Fire of the ancient Philosophers, which is called the *Fire of Artephius*, by Virtue of which secret fire, is generated the vegetable, Animal and Mineral stone of Philosophers, and also particularly out of all Vegetables, Animals, and Minerals, their Quintessence, or highest Power, without the help of

any common Fire, without Furnace, Glasses, or any other known Chymical Instruments, is to be obtained in a few hours, without any Labour or Cost: And also things incredible and unheard of are by it brought to pass; of which great Secret, no Philosopher hath hitherto made the least mention; as the before cited Treatise will sufficiently testifie. The second Fire is like to it, *viz.* the same with which the *Israelites* in old time did set fire to their Sacrifices, which their Priests, when they were to go into the *Babylonish* Captivity, did hide in a dry hole in the Earth; and many years after, when they were released from their Captivity, and returned, they found not a Fire, but instead of it a *Viscous* water, which they poured upon their Sacrifice, and it kindled it, as well as if it had been done by the secret heavenly fire, of which you may read more in the *Maccabeus*. This secret fire of the Ancient *Caldeans* is also comparable to the *Æthereal* fire, of which Meteors, Thunder and Lightning are generated, and also the Thunderbolts themselves, which are cast down upon the Earth, to the great astonishment of Mankind. *Hermes* hath very well said, that what is above is also below, which is proved by the secret Fire of the *Caldeans*. For by a light, plain and cheap Art, one may easily produce the same Lightning fire, together with the Thunder, here upon Earth; of which the following Book shall treat more fully. And therefore to that I refer the Reader. I could not but here touch a little at these three Principal Fires, by which are generated the three chief Jewels of the World, that the Enquirer after the Wisdom of God may know, what great Mysteries of God are to be imparted hereafter to the ungrateful World, before I publish this Book of Fires and Stones. Now to return to our particular, and see by what means our Red Oyl of *Mars* and *Antimony*

may be Coagulated, after a nearer way, into a tinging Stone, with which Silver particularly, with all other inferiour Metals, may be Meliorated, that out of them may be had good Gold and Silver with profit. And also, how by it the Tinctures of Stones, both noble and ignoble, may be drawn out of them, and after the Tincture is drawn out, to incorporate it with Silver, and Colour it. And also, all precious Stones exalted in their natural Colour, and if their Colour be too high, it may be diminished, and the Stone rendred more precious, and how this is to be done, the following Practice will reveal. The second and easier way, how to bring our tinging Red Oyl of *Mars* and *Antimony* into an hard, sweet, and not Corrosive Stone, is this.

In the foregoing Appendix, I have said somewhat of the Coagulation of the sharp Spirits, of Metals and Minerals, and have proved, that such Coagulation is to be made by the help of Old, cold and dry *Saturn*, but because I did not there declare, how it is to be effected, I think fit to do it here, and it is thus. All Liquors or moist things, if they are to be dryed, then the moisture must be drawn off from the thicker part by an easie heat, and then the thicker part remains by it self, and is used according to its Appropriation, as we know, that *Aloes*, *Myrrh*, *Opium*, and all other Gums and Juices were thin at the first, and were inspissated into concrete Juices, by the Sun or Fire. It is true, such an Inspissation of vegetable Juices is easily done in this manner; but Mineral distilled Spirits, and Corrosive Oyls, cannot be thus dryed, for they will endure heat, but if you give too great a heat, they will fly away and not be thickned, as you may see in Oyl of *Vitriol*, which by it self can never be dryed, although it be never so long kept in heat. But if you will have it dry, you must add something

to it which is more than dry, and hath also power to exsiccate moisture. We see in the baking of Bread, when we put water to the Flour, and mix them together to make Dough, and of that bake Bread, that the Flour, although it be dry, yet it cannot retain with it self the Water, in a hot Oven, for that perfectly flies away from the Meal by the heat, and if the Fire be encreased, all the moisture would be gone, and only the Meal remain in form of a dry Earth, having quite lost the form of Bread, because the Meal was not radically united with the water, and therefore they could not endure the heat together. If one take a dry Earth, Sand or Powder of a Stone, and put water to it, the dry Earth will imbibe the water, and to the Eye reduce it into Earth, but this is not constant. For if you distil this Earth by a Retort, all the added water will again come over, and leave the Earth alone, but this is to be understood of common water. But suppose, one should add a heavy Mineral water as *ol. Vitrioli* to a dry Earth, and should commit this mixture to the Fire, in hopes, that the dry Earth should retain with it self the Corrosive Oyl of *Vitriol*, and also reduce it into a dry Earth, it would prove a mistake, for the Oyl of *Vitriol*, in a sufficient heat, would wholly forsake the Earth, because the Earth is dead, and hath no Sympathetick, or Magnetick power, to conjoyn it self radically with the Oyl of *Vitriol*, so as to remain together constant in the Fire; but such an Earth, which by an innate Love draws the Oyl of *Vitriol* to it self, and endures with it in heat, or cold without Separation, must proceed from the same Original with it, for every thing loves its like, and hateth what is unlike to it. Now, because the Oyl of *Vitriol* proceeds from a Mineral kind, therefore it loves the Metals, but no common Earth or Stones, for

it hath no affinity with them. Now if the Oyl of *Vitriol* be to be converted into an hard Mineral stone, it must be done by its like, to wit, by Metals, and by such Metals as are most nearly related to it, *viz.* the Metals that are yet imperfect, for all Metals and Minerals proceed from the same Root, and therefore they all love one another, yet one Metal loves Oyl of *Vitriol* more than another, and the immature Metals, better than the ripe ones. For although Gold and Silver also love Oyl of *Vitriol*, yet they do it by Compulsion, and not out of true Love, for they are very difficultly dissolv'd by it, because they have put off their vitriolick Nature in their Fixation: On the contrary, *Mars* and *Venus* have not yet so done, and therefore they easily assume the Oyl of *Vitriol*, and are dissolved by it, because it was driven out of their Body by the force of Fire, therefore one might say, that *Mars* and *Venus* were the true Metals, and easiest to Coagulate the Oyl of *Vitriol* and *Antimony*, and to fix them into a Stone, yet this is not so, for *Mars* and *Venus* are of a gross Nature, and have too much unprofitable Earth, which may easily be seen by their difficult melting in the Fire. Then what is to be done? Shall *Saturn* or *Jupiter* do it, both which are of an easie Fusion? Or shall *Mercury* do it, which is always Liquid? I answer, that *Mercury* cannot Coagulate, nor make fixed, because he himself is not fixed, nor Coagulated. Neither can *Jupiter* do it, for although he is fluxible and dry, yet he is easily transmutable by a small Fire, into an influxible Earth, which cannot again be reduced into a fluxible *Metallick* Body: What then, shall despised *Saturn* do it, (may one ask) who is unfixed himself? and which way is it then possible for him to fix a Body, which is more fluid than himself? To this I answer, that the Fixity is not the only cause of the Coagulation of the

Oyl of *Vitriol*, for then this Coagulation might be easiest performed, by Gold and Silver, which, yet is not done, and therefore this Coagulation of Corrosive Spirits must be done by dry *Metallick* Subjects. Now we know very well, that among all the Metals *Saturn* is the driest, of which *Paracelsus* writes very well in his Book of Vexations, which I have already alledged, and confirmed in the foregoing Appendix, [viz. *Pharmacopœa Spagyr. Pars 7.*] It is also true, that a better Coagulator, of all Corrosive Mineral Spirits cannot be found, than old, cold, and dry *Saturn*; for by his great dryness he Coagulateth the moist Mineral Spirits; by his great innate sweetness, he dulcifies all Corrosives; and by his fluxible *Sulphur*, he renders all influxible *Metallick* Subjects, fluxible. Now we need nothing more to our Red Oyl of *Vitriol*, *Mars* and *Antimony*, but that it be Coagulated into a hard, sweet and fusile Stone, which Coagulation can only be done by *Saturn*, and by no other Metal or Mineral, which I have sufficiently proved in the before mention'd Appendix, and also in my Book of the *Three Principles of Metals*. Now we have sufficiently understood, that the Coagulation and Dulcification of our Red Corrosive Oyl of ♂] and ♁ into a fusile Red Stone, can only be done by the help of the Old, Cold, and, of all Fools, despised *Saturn*. Concerning the Nature and Property of *Saturn*, it would not be here amiss, to say somewhat of it: But because *Paracelsus* hath already sufficiently done it, in his *Cœlum Philosophorum*, and I have already confirmed it in the forementioned Appendix, I think it here unnecessary to add any more. Yet I cannot forbear to say this, that *Saturn* naturally contains yet a good quantity of the Corrosive Oyl of *Vitriol*, which doth not vanish in melting, nor cannot be easier perceived, than when other Metals are added to him

upon the *Cupel*, how soon he swallows them, and draws them with himself into the *Cupel*, except Gold and Silver, which he cannot touch, because they have no radical Communion with him, but are cleansed by Nature from their superfluous *Sulphur*, for this devouring Wolf *Saturn*, can consume nothing, but the combustible *Sulphur* of Metals, but the incombustible fixed *Sulphur* and *Mercury*, he cannot touch, as appears in Gold and Silver. The ancient Philosophers painted *Saturn*, as an Old Man, with one foot on a Wooden stilt, having in one hand a Sythe or Sickle, and in his other hand a Child, which he puts to his mouth to devour it. By this they would intimate the devouring Nature of *Saturn*, which they have also expressed in these Words, *Falx ejus Mordax est*, he hath a sharp Sickle, beware of him, for he hath no mercy, which I have found to be true, not only by the *Cupel*, that he Corrodes and eats through them, for he Corrodes Sand and Stones, and reduceth them into a transparent Glass; if he doth this by his own Nature, what will he not do, when his Sythe is whetted by the Corrosive Oyl of *Vitriol*? Certainly he can do ten times more: I have experimented it, he that will know it, may also do the same: By him we wash and cleanse common Gold and Silver on the *Cupel*, but that Gold and Silver, which is still hid in the imperfect Metals, as *Mars*, *Venus*, and *Jupiter*, as also in the vile Minerals and Stones, which is still closely tyed to the combustible *Sulphur*, here the common *Saturn* is too weak and can make no Separation. On the contrary, ours can effect it very well, and therefore I commend him, for after his Sythe is whetted by the Corrosive Oyl of *Vitriol*, if then one handle any Metal, or Mineral with him in a Crucible, he will in a moment eat a hole through it, and run out; Nay, if one should put two or three

Crucibles one into another, he would do the same, but if one cast somewhat before him, to satiate his Wolf-like Appetite, then he leaves the Crucibles whole, but doth what the Artist would have him, and is used as a tame Wolf, devours the Sheep no more, but keeps them from other devouring Wolves.

Before I could bring him to that pass, to prevent his biting, I tryed many sorts of Vessels to hold him, nay I have put him upon a Test made of bone Ashes. 'Tis true, he did not eat in, but remained fixt upon the *Cupel* like Silver, and would not Coppel, by which I perceived, that any common Lead, by help of the Red Oyl of *Mars* and *Antimony*, may in a very short time, not only be reduced into Gold and Silver, but also be fixed into a true Tincture, which I have sufficiently shewn in the foregoing Appendix, that some of the ancient Philosophers have made their tinging Stone out of *Saturn*. But setting this aside, because I yet never went so far, but I should not think it at all difficult, to make an universal Tincture, to transmute all the Metals into perfect Gold and Silver out of *Saturn*, with the Red Oyl of ♂ and ♁, if my weakness of Body would permit. But I concern not my self about that, but leave it to those that are younger, for I can easier come to an universal Tincture, by the help of the secret Fire of Philosophers, than by *Saturn*; but in the particular Transmutation of Metals, I have performed many things with the Stone of ♄, as the following Practice sheweth.

Now followeth the easie Coagulation of our Red Oyl of Mars *and* Antimony*, into a Red, Sweet, and fluxible Stone.*

℞. Some Pounds of common Lead, melt it, and pour it

out into a long Ingot, and rasp as much thereof as need shall require; take of this a Pound of more, and put it into a Glass Retort well coated, pour to it half the quantity of the Red Oyl of ♂ and ♁, set it in a Sand *Cupel*, and give Fire gently by degrees, and there will come over no Red Oyl, but only a clear and insipid Water, and all the sharpness, with the Red Tincture, will remain with the ♄. If you break the Retort, you will find no *Saturn*, but this Red, Tinging, and easie melting Stone, of such Virtues as I have told you before. Now if you will make use of this Stone for the particular Meliorating of the inferiour Metals, as also for noble and ignoble Stones, you must powder it, and mix it with the *Metallick* Ashes, and melt them, and you will find the good Metal to be separated from the rest, the unprofitable part, and superfluous *Sulphur*, will turn into dross, and the purer part will settle into a *Regulus*, which you must blow off upon a Cupple, and you will find the Silver and Gold, which our Stone hath separated out of that Metal; for our Stone hath this Nature, to separate in the Fire the good from the bad, to turn the Good into a Metalline *Regulus*, and the inferiour into Dross. For Example, I have a mixture of Metals containing Gold, Silver, *Venus*, *Mars* and *Jupiter* together, I granulate this mixture, and mix them with our Stone, melt them together in a Crucible, our Stone only spoils the inferiour Metals, as ♂, ♀ and ♃, which it consumes into a Dross, but the purer as ☉ and ☽ it separates from this Dross, and precipitates them into a *Regulus*. But if this *Regulus* should not be fine enough at the first melting, you must *Cupel* it with Lead, neither doth all the ☉ and ☽ come out of this mixture at one melting, but some remains with the Dross, therefore you must again put this into a Crucible, and put to it some

filings of Iron, and so melt them together, then the wild *Sulphur* will be destroy'd by the ♂, and so let the Gold and Silver fall by Cupellation. The Dross you must reserve, till you have enough to melt in a small Wind Furnace, and it will be again reduced into Lead, which you may again use for the same Labour; for the Reduction of this, I have invented a peculiar small Furnace, which may be carried from place to place, and also you may pour out the Dross after it is melted, without breaking any thing of the Furnace, so that you may use it very often, before the Hearth will need mending. What is here said of the Separating of *Metallick* mixtures, the same may also be understood of those Mixtures, which are yet in the Oar, for the Oars are as easily separated by our Stone, as the Metals. This is the use of our Stone, before its Tincture is yet fixed, and therefore not able to transmute ☽ into ☉. Presently you shall also hear, how it may be rendred capable to transmute any Silver, by Degrees, into good Gold. I think it fit, first to say somewhat, how by the help of our Stone one may attain great Profit from Gems. For the Gems have in them fixed Tinctures, which our *Neptune* can spoil them off and so incorporate them with the naked *Diana*, to make her a Golden Vest, which is done thus: ℞ The fragments of coloured Gems, *viz.* of Granates, Rubies, Saphirs, Hyacinths, Jaspis, *&c.* put a little of these into a good Crucible, and put to it three times as much of our Stone, cover it well, and melt it upon those Stones, and our Stone draws out the Colour of the Gems, and Colours it self yet deeper. With this Red Stone, if any filed ☽ be mixed with it, and melted, it draws the fixed Tincture to it and becomes Golden, so that in the Separation it yeilds much Gold, *N. B.* The fittest Silver for this work is, that which is precipitated by ♀ out of *Aqua*

Fortis, yet you may also use that, which is precipitated by Salt water. If the work be well done, the Gems will be white, which you may use instead of small Diamonds, for the Fire doth not take away their hardness, *N. B.* If a Man hath Skill enough to take away the Colour from the great Gems, as Granates, and Hyacinths, he may acquire Riches in a short time; for afterwards you may tinge other white Stones into Rubies, by the help of this Colour, but this Labour requires an experienced Artist, but no Pratler: And this is sufficient for this time, he that delighteth in these Arts may Practise them, and try how God will prosper him in it. If he can but obtain the Extracting of the Gems, he needs no more, for one Gem, of a Drain, is worth more than several Ounces of Gold. After we have briefly understood, how to make good Profit with our Red coagulated Oyl of *Antimony* and *Mars*, before it is yet fixed, with the imperfect Metals and Gems: You shall also hear what it will do, when fixed. And this you must know, that if a Tincture very well prepared, can endure melting in the Fire, yet for all that, it may not be accounted fixed; for inasmuch as they are made out of unfixed Metals, they cannot themselves be fixed; if one should object, and say, that the Tincture was drawn out of fixed Iron, and therefore it must also be fixed, although the *Antimony* was not fixed: I answer, that Iron cannot be called fixed, although it doth not fly in the fire, for *Saturn* can still devour it, but this only is to be reputed fixed, which endures the *Cupel*, which neither ♂ nor ♁ doth. Therefore the Tinctures which are extracted out of them, cannot endure the *Cupel* before they are made fixed. For which reason the highly experienced Philosopher *Paracelsus* tells us, that we must not take common Iron to draw our Tincture, but such as cannot be again reduced into

Iron, which we must seek in the green and blue *Scoriæ*, out of which Iron hath been melted by the strength of Fire, and are cast away. Because the Iron, and also every imperfect Metal, containeth two sorts of *Sulphur*, *viz.* a combustible, and incombustible; the combustible is melted by a strong Fire, into a dead Glass, but the incombustible remains unhurt, hidden in the said Glass, and may be drawn out of it by Art, and brought into a Tincture, that will endure the *Cupel*. I could cite *Paracelsus* for several other things, because he writes very honestly, but it is not here convenient. It would be very well, if some one would reprint this Treatise, for it is out of Print, that the way to the Truth might be shewn to them that err. And if none will do it, I shall do it my self, for it is commendable to preserve a lighted Candle, and not suffer it to go out. This is enough of the Fixation of *Paracelsus*, which is done by the great strength of common fire. Now we will also hear, how this Fixation may be effected by an artificial moist fire, much easier than by the former. In my Treatise lately published of the *Three Principles of Metals*, I have taught how any combustible *Sulphur* may be fixed in a very few hours, so that no Fire can any more hurt it. Now if such a quick Fixation of combustible *Sulphur*, can be done with a moist Fire, as I have shewn it may in the said Treatise, what may not be done, by the same Fire in the more fixed Metals, such as Iron? I have also shewn in the same place, that ♁, as well as common ♃, may be made fixed in few hours, I have also said that ♁ and common ♃, so fixed have no ingress into Metals. After that, I have also taught, how to procure this ingress by common Gold, if the Gold and the *Sulphur* be united, and then a fixing *Aqua Fortis* drawn from them, that then it can never be separated from the Gold, but that the

Gold so preserves it upon the *Cupel*, that *Saturn* cannot enter it: Now if this may be done with common *Sulphur* and *Antimony*, why not also with *Mars*, which in its Nature approacheth Fixity? Therefore it behoveth, that we should fix our Tincture of ♂ and ♁, after the same manner being united with ☉, by the Humid fire, that both may be permanent upon the *Cupel*. For without this Fixation nothing of moment can be done. For if these Tinctures be added to Silver, and are not constant in the Fire, they with the Silver, become Metals again, vanish upon the *Cupel* with ♄, and leave the ☽ nothing bettered. Therefore nothing else is to be observed, but to bring into Perpetuation the prepared Tinctures of ♂ and ♁, by the addition of Gold, and the due Abstraction of the fixing Waters; and then the Tinctures remain with the Silver unseparable, and the devouring *Saturn* cannot hurt them upon the *Cupel*. Let this suffice concerning the particular Fixation of our Red Oyl of ♂ and *Antimony*. Now followeth, how to make an universal Coagulation and Fixation of this Oyl.

The PROCESS.

℞. Three or four Ounces of our Coagulated Oyl of *Mars* and *Antimony*, into a Red Stone by the help of ♄, grinde it into an impalpable Powder, and draw from it ten or twelve Ounces of strong *Aqua Fortis*, which hath been first abstracted from decrepitated Salt, and in which is dissolved half an Ounce of Gold: Secondly, and Thirdly, abstract from it again fresh *Aqua Regia*, but without Gold; then the Gold will radically unite it self with the Tincture of *Mars* and

Antimony, and they will be constantly fixed together, by means of *Aqua Regia*. When this is done, pour upon it a good quantity of common Water, let it boyl for some hours, and it will draw out the sharp Spirits, which remained with the Tincture, this may be once or twice repeated, then dry it, and it is fit to tinge Silver into Gold. This Tincture melts as easily as Wax; the *Saturn* which is mixed with it, doth not hinder it, it is true, he goes into the Silver with the Tincture, but is easily separated by the *Cupel*. I could set down many more Dexterities, in the Preparation of this Tincture, but it would swell too much, it being already greater than I expected, for I only thought to have annexed this to the Appendix, as a Corollary, but it is grown bigger than the Appendix it self. Here should have been added, how this Tincture of *Antimony* and *Mars*, by the help of our *Alcahest*, might be made into a constant Tincture, easily and in great quantity, without Cost; so compendiously, that in three or four days time, a good quantity of Tincture may be made fit to graduate a great part of Silver into Gold: But the time will not allow me here to insist any farther on it, but must defer it the second Appendix, where the Reader will find greater Contentment. For this work is so easily done with the *Alcahest* without great Cost, that the most ordinary *Mechanick* may imitate it, and profit by it. There will come another World, when Art will flourish, and Pratlers perish. Take notice of this, for the time is at hand, *Elias* the *Artist* will soon appear, of this Read *Paracelsus* in his Book of *Vitriol*. At such a time there will be great changes in *Europe*, and chiefly in the *German Empire*, *France* and *Swedland*. For *Elias* the *Artist*, it may be, when he comes, will bring with him some Military inventions, and by his great Power establish the Fifth Monarchy. That in these times

great Changes will be in *Europe*, is not to be doubted, for the Heavens do foretel it. God send us what is good, there being now nothing of good left, how then is it possible, it should remain longer in Peace?

OF
ELIAS the ARTIST:
OR,
What we are to understand by Elias the Artist, and what he is to reform in the World at his coming.

VIZ.

The true Spagyrical Medicin of the Ancient Egyptian *Philosophers, which has been lost for above 1000 Years, and will be restored by him, and illustrated with many new Inventions, by rejecting much unprofitable Smut-work, and pointing out a nearer and better way to obtain good Medicines, with little Trouble or Charges; which true Medicine he will bring along with him, and declare the same to the present deceived World. Translated out of the* High-Dutch.

Courteous Reader,

Towards the end of my last published Treatise concerning the Infernal *Goddess Proserpina*, I took occasion to mention, that probably soon after my Death, the long-since fore-told *Elias Artista* would appear, and bring along with him a great Light, to enlighten the dark World, enabling them to reject the Evil, and embrace that which is good: As likewise, that many great changes will happen in divers Kingdoms, and especially in the Roman Empire, where one Potentate will overcome the other, and make himself Master of his Dominions. I there also shewed what, *Paracelsus* hath declared concerning *Elias Artista*, and fundamentally confuted the groundless Opinion of some Persons concerning the same in my Fourth Part of the *Prosperity of Germany*, shewing that that Prophecy is not to be understood according to the Letter, and to be meant of some great Man in the World, but Magically; for the word *Elias* by transposition of Letters, makes out *Salia*, and so likewise doth the word *Elisha*, as I have formerly explained these words in my Treatise *of the Nature of Salts*. *Elias Artista* therefore according to the style of Philosophers, signifies extraordinary and unknown Salts, by which great and incredible things may be performed, and accordingly when manifested, will be the cause of great changes in the World.

These Salts were known to the Philosophers of old, who yet did not think fit any further to open themselves concerning them, than in declaring, that the Philosophers Stone must be prepared by them. *Turba Philosophorum* speaking concerning this matter, saith, *This our Salt encreases the Redness in* ☉*, and whiteness in* ☽*,* and further*, if God had not created this* Salt *it were impossible to make the Elixir.* It is probable,

that the Philosophers who wrote concerning this wonderful *Salt*, had no knowledge of any other, supposing that this *Salt* only was proper to extract and prepare Tinctures. I must acknowledge there is no *Salt* in the World, that hath such virtue to encrease and exalt the Tincture in common as well as Philosophical ☉ and ☽, and that as it were in a moment, as soon as the Monarch of *Salts* is added to them. Neither doth our *Salt* only exalt, but it also joyns the King of Metals so indissolubly with his Queen, that no Art can separate them. A thing worth our wonder, that a Volatile white *Salt* should have the power to meliorate ☉ and ☽, and to exalt the same permanently. For to give some further light to the matter, I declare, that this *Salt* of which the *Turba* speaks, doth sublime white, and being dissolved in Water, gives a white Solution: It is white, and continues white both in and out of the Fire, and is altogether Volatile, for which reason I have called it my *Secret Salt Armoniack*; but as soon as it is join'd with ☉ or ☽ it becomes fix, and makes the ☉ and ☽ fixer than they were before, affording them a kind of *plusquam* perfection, and inseparable Conjunction. Let none think that this *Salt* of which I here speak, is like, or the same with that, which is made of Oyl of Vitriol and Spirit of Urine, of which I have treated in the Seventh Part of my *Pharmacopœa Spagyrica*; for this our Sovereign *Salt* has no affinity with that, for as much as that *Salt* makes all things Volatile, and separates their purer part by Sublimation from the gross *fæces*, but this our white *Salt*, though it be unfixt it self, yet has the power to fix unfixt Metals, so as to endure the Test, provided always that the virtue of this unfixt *Salt*, be first fixed by its conjunction with ☉ and ☽. For the whole substance of this *Salt* (which the Philosophers have

called a Bishop or High Priest) when ☉ and ☽ as King and Queen are inseparably join'd by it, doth not abide with the ☉ and ☽, but only by its hidden Tincture and Virtue, whereby it exalts all colours, the unprofitable body of the *Salt* separating from them, as soon as the Conjunction is made, even as a Priest, when he has join'd two Persons in Wedlock goes his way, having performed his Office. And indeed this inseparable Conjunction of ☉ and ☽, may well be compared with the Conjunction in Marriage performed by a Priest; for as when the Priest has join'd two Parties together in Wedlock, they must inseparably continue so till death; so likewise when the Metallic Copulation of ☉ and ☽ is performed by means of our Metallick High Priest, consecrated by *Jupiter*, then are their Bodies thence forward inseperable; the Water finds no ingress into them, the Air cannot pierce them, and Earth much less, yea, the strongest of all Elements, the Fire hath no power over them, but, like a Married Couple, abide together in all contrariety and adversity, and according to their Kind do multiply *in infinitum*, being supported with due Food and Nourishment; for we know, that except we be refreshed and strengthened with Meat and Drink, we can neither live nor multiply; the multiplying virtue in many and all Creatures proceeding from the Nourishment they take in. And the same we are to understand also concerning the Metallick Multiplication, for when ☉ and ☽ are permanently conjoined, by means of the Metallick High Priest, this alone is not sufficient in order to their multiplication, but they moreover must be supported with convenient Meat and Drink. And as Man at his first coming into the World is nourish'd with his Mothers Milk, in like manner the Philosophers do feed their ☉ and ☽ with their

Mothers Milk, that is, with their first Essence, from whence they deriv'd their Original. Now we know that in contemptible *Antimony*, the first *Ens* of ☉, is copiously to be found, and may with ease be drawn thence, in the appearance of Milk, with which ☉ and ☽ are to be nourished in order to their Multiplication and Increase. The Nourishment then wherewith our conjoined ☉ and ☽ are to be refreshed, and disposed to a Multiplication *in infinitum*, is our *Lac Virginis*, Virgin Milk and Mercurial Water, which strengthens and increaseth the Procreative Seed in ☉ and ☽ both in quantity and quality. Wherefore also this feeding or inceration has always been recommended by the Philosophers, as a most necessary thing, whereby, as it were, a new life, and multiplying virtue is communicated to the inseparably united ☉ and ☽.

Furthermore we are to know, that after common ☉ and ☽ by means of the *Salt* of Art, are inseparably conjoined and exalted in their colours; yet nothing can be performed with them, because they want an ingress into other Metals, which they have lost by their Conjunction, which therefore must be restored to them by means of our mercurial Water, which not only communicates Ingress, but also easie Fluxibility and Multiplication to the destroyed Bodies of ☉ and ☽. For when our ☿ Water is fixed in Conjunction with the fixt ☉ and ☽, then it is no longer a Volatile ☿, but is changed by the exalted ☉ and ☽ to a fixt Tincture. This done, if we would multiply this Tincture, we must add to it some of our *Mercurial* Water, and fix them together as before, which Multiplication we may repeat as oft as we please. For when once ☉ and ☽ are made irreducible and more than perfect, by means of our *Salt* of Art, we need never after to begin our Work a-new, but only mingle the fixt with the volatile in order to their Fixation; seeing that our

Mercurial Water is in its inside better than ☉, for which reason also it turns the ☉ and ☽ when fixed with them into mere Tincture. Let no Man wonder why in this Operation we join ☉ and ☽ together, and not rather make use of ☉ alone, forasmuch as this ☽ hath no colour at all outwardly, though in its inside it be higher of colour than ☉ it self, both which Metals nevertheless, except their colours be exalted by the *Salt* of Art, and Inceration, without our *Mercurial* Water can never be changed into a true Tincture, because ☉ and ☽ have no mere Tinctures than is sufficient for themselves, but being exalted by the tinging *Salt* of Art, they are capable of colouring white Metals, but not before. Indeed ☉ alone without the addition of ☽ may be exalted by our *Salt* of Art, and *Mercurial* Water into a Red Tincture. In like manner also may ☽ alone be exalted in its whiteness by our *Salt* of Art, and ☿, one part of which exalted ☽ tingeth many parts of ♀ into good and fixt ☽♀, for our ☿ wherewith we incerate and multiply, may be fixed into a Red or White Tincture, according to the ferment we join with it, with ☉ it makes a red, and with ☽ a white Tincture. However the best way is to put ☉ and ☽♀ together in due weight and proportion, exalting them with the *Salt* of Art, by which means the whiteness in ☽♀ when join'd with ☉, becomes changed into Redness, of which mine Eyes are Witness. Of this Exaltation of ☉ into a high purple colour, and of ☽♀ into the highest whiteness, I gave an Ocular Demonstration to some of my Friends, before my Sickness, but none of them have since undertaken the Work, and my self by Sickness have been hindered hitherto.

Ovid excellently describes the preparation of this Tincture, where he tells us, that *Jupiter*, having chang'd himself into a Golden Rain, fell through the

Tiles into the Lap of *Danaë*, (shut up by her Father *Acrisius* King of the *Argives* in a strong Tower) and got her with Child, of whom afterwards *Perseus* was born, who in process of time being mounted on the Winged Horse *Pegasus*, killed the Sea-Monster, delivering the fair *Andromeda*, whom he took to Wife; and afterwards vanquished the *Gorgons*, and made himself Master of the Golden-fruit-bearing-Orchard. In which Fable the whole Work is clearly and punctually described, but the reason why it is so little understood, is, because so few makes it their business to consider thereof, or put their hands to the Work. For attentively considering the matter, we find that the King of the *Argives*, in the sense of the Philosophers, is our Black Lead, whence we prepare our Snow-white *Virgin Milk* or Mercurial Water, which is the Beautiful *Danaë*, that becomes inpregnate by *Jupiter*'s Golden Rain. *Archivum* signifies a Treasury of secret and important Records, and no Subjects contains more secrets, than doth our Black *Magnesia*. What is more lovely to behold than *Jupiter*'s Golden Rain, whereby the fair *Danaë* becomes impregnate? And from whence does this Rain proceed, but from our *Salt* of Art, without which it were impossible for ♃ to change the ☉ into such a desirable Rain? What is the Beautiful *Andromeda* else, but *Diana* the Consort of *Apollo*, who is exposed to the Sea-Monster to be devoured, and is delivered by *Perseus*. And, in a word, the whole Work of preparing a Tincture from the foresaid Subjects is so clearly set down by *Ovid*, as it could not well be set down more clearly; and yet how little is it understood, by reason of the general Stupidity and inadvertency of the Readers. I have here discovered all the ingredients belonging to this Tincture, so as nothing remains, except putting hand to the Work,

and begging God's Blessing upon it: For no good thing was ever the effect of idleness: But Praying, Seeking, and unwearied Labour, are the Well-Springs of all useful Arts.

And herewith I shall conclude the use of the *Salt* of Art, in preparing the universal Tincture upon all Metals, transmuting the same into ☉ and ☽♀. I suppose it hath been sufficiently made out, that the foretold *Elias Artista* is nothing else, but this our *Salt* of Art, whereby the Redness in ☉, and Whiteness in ☽♀ are exalted into Tincture. Wherefore also this Salt, by those who know its use, has been called the Monarch of Salts: For every Species of things hath its Monarch, excelling all the rest of the same kind; upon which account, *Paracelsus*, who in his Life-time had not his Peer, obtain'd the Title of Philosophers, Physicians and Monarch of Chymists. Forasmuch therefore, as our Salt of Art hath not its like in the World, for working Wonders in *Alchimy*, it may well be call'd the King of Salts: Tho' indeed there be one only Salt which excels him, as far as *Elias* excell'd his Servant *Elisha*: For as *Elias* went up to Heaven in a fiery Chariot, leaving his Mantle to *Elisha*, so this Salt may more properly be compared to *Elisha* than *Elias*, because *Elisha* staid here beneath, and did not ascend to Heaven, as *Elias* did. Now the Chymists generally prefer that, which ascends by the force of the Fire, before that which stays behind, tho' this Rule be not without Exceptions; for that which remains is not always to be rejected, because sometimes much good lies hid in it: As we may perceive in *Elias* his Ascension to Heaven, who left his Mantle behind, which was not without Virtue, as appeared when *Elisha* with it divided the River *Jordan*, going over dry-shod. The Chymists commonly call that which remains after Distillation, or Sublimation, *Caput*

Mortuum, but without good ground, because in that which stays behind, often a great vivifying Virtue lies hid. This we may gather from the Virtue (as has been said) remaining in the Mantle of *Elias*, and in the dead bones of *Elisha*, which as soon as it touch'd the dead Body, raised it again to Life: If *Elias* his Mantle had been a dead thing, *Elisha* could never have divided *Jordan* therewith, nor could *Elisha*'s bones have raised the dead to Life, if they had been dead and without Power. Consider well what I have said, and you will find more in it, than I dare more plainly declare; remembring always, that *Jordan* is nothing else, but our ☿ Water.

Concerning the Salt *of Art.*

Having already heard, how by means of the fixative *Salt* of Art, common ☉ and ☽♀ may be prepared into a Tincture, for the cure of Men and Metals; it now remains to be declared, how, by means of the Volatilizing *Salt* of Art, most excellent Medicines may with ease, and small Charges, in a very short time be prepared, out of all Vegetables, Animals and Minerals. We are here to take Notice, as has been already hinted, that the Property of our *Salt* of Art, is, to make the volatile *Metallick* Subjects fixt; of which fixative Property, notwithstanding it may in a few hours, easily and without Charges be devested, and a Power of Volatilizing all things introduced into it, instead thereof, by which, incredible things may then be performed, both in Physick and Alchimy. Of which Wonder-working *Salt*, the present World knows nothing at all, and probably nothing will be known of it, till God shall permit it to be revealed by *Elias* the *Artist*. What I know of it, I am willing to communicate for common Good, not doubting, but that God in his due time by means of Good men will

reveal the rest. To volatize this fixative *Salt* of Art, is an easie thing to the Wise, but to the Ignorant altogether incredible; though it be no difficult thing to me, to make it credible and apparent, which if thou wouldest do likewise, proceed thus: Pour upon our *Salt* of Art, in due proportion good Spirit of Wine, which draw off by Distillation, and you will have a wonderful Spirit, of great Virtue; but you will find your *Salt* of Art so weakened, as it cannot be used again: But the Spirit of Wine, impregnated with the Virtue of the *Salt*, performs Wonders, that were never yet made known to the World, of which we shall hear more hereafter. For the Spirit of Wine in this abstraction hath its Virtue multiplied ten fold, so as it not only extracts the Essence of Vegetables, Animals and Minerals, both easily and suddenly, carrying them over the Helm; but also extracts the Tinctures from ☉ and ☽, and all precious and common Stones, and brings them over. Of which Extraction and Separation of the tinging Soul from fixt and unfixt Bodies, no Philosopher hitherto hath divulged any thing. Let us now take a view of the great Secrets, which may be obtained by means of our Alcolized Spirit of Wine. *Paracelsus* had an Alcolized Spirit of Wine, which he called *Alcohol vini*, with which he did great things; but it is not likely, that his *Alcohol vini* was of the same Virtue, as mine here described; for if so, it could not have been so long concealed. However it be, we cannot deny *Paracelsus* the Title of Monarch of Physicians and Alchymists, though he may have been ignorant of our *Salt* of Art, with which our *Alcohol vini* is prepared; for no Body knows all things; and God bestows his Gifts, as best pleaseth him.

But to our return to our *Alcohol vini*, and the manner of using it. First we are to take Notice, that

as for Vegetables and Animals, they are to be reduced to Powder, if they be dry, but if fresh, they need only to be a little bruised or chopt, and then pour upon them our *Alcohol vini*; if the Subjects be dry, we may digest a while before abstraction, but in Case they be moist, we may distil the Spirit immediately, which carries over with it all the Virtue of the said Vegetables and Animals, together with the Taste and Smell, and poured upon Flowers, and distill'd, sometimes brings over their Colours also, which hitherto hath been looked upon as very difficult, if not impossible. But before we make use of it upon Minerals, we must prepare them, for our *Alcohol vini* is not strong enough to lay hold on hard Minerals, and compact Metals, so as to extract their Essences, and therefore they must be first opened with Waters, that are not Corrosive, and afterwards be digested with our *Alcohol vini* and then distilled; which being performed in this Order, the *Alcohol* will carry their Essences with it over the Helm. This is the true Preparation of Vegetables, Animals and Minerals, in order to the extracting of your Essences, by means of our *Alcohol vini*. But here we must observe, that this Preparation of fixt Metals, by opening of their Bodies, must be done with fixt Liquors, and not Volatile; for if the dissolvent were Volatile, it would come over in Distillation with the Spirit of Wine, and spoil all; because after Distillation, the Spirit of Wine must be separated from the Essence it hath brought over with it; now if the dissolvent, by being Volatile, should come over the Helm, it would remain with the Medicine, and consequently spoil it. We are therefore to remember, that this dissolvent must be Firey, not Corrosive, without any Smell or bad Taste: The dissolvent being as necessary to our Work, as is the Spirit of Wine it

self: Wherefore he who intends to plant good Fruit, in this Gold-bearing Orchard, must be provided with both these Keys, *viz.* with a *Menstruum*, not Corrosive, to dissolve Metals and Minerals, and with a well prepared Alcolized Spirit of Wine, without which, he cannot obtain the Tincture of Metals.

Having thus spoken of the foregoing Preparation of Vegetable, Animals and Minerals, in general: I shall now proceed to shew in particular, how out of them most surpassing, and excellent Medicines may be prepared.

And first to begin with Vegetables; their Essences are to be distilled in *Balneo*, with a moderate heat, changing the Recipient when it is needful: For that which comes over, first is of another Nature, than that which distils next, and that again differs from that which comes last. There are some Vegetables, that first give their best part, and the worst last, whereas in others, the worst comes first, and the best stays till the last. For the rest, it is easily apprehended, that the Virtue of Flowers and Herbs; especially when green and tender, doth more easily yield to Distillation, and come over sooner than the Essence of hard Wood, which is more closely shut up in its Body. He that proceeds aright in this Work, will meet with great delight and Satisfaction, and bless God for the Communication of this Light. For our Alcolized Spirit of Wine brings over Vegetable Essences, of a most fragrant Odour, which common Spirit of Wine can never do: We may indeed extract Vegetables, and Minerals with common Spirit of Wine, but cannot carry the said extracted Essences over the Helm: Which extracts made with common Spirit of Wine, are not to be compared with those, which our *Alcohol vini* brings over with it, differing

as much as the shell from the kernel. For our Essences, as soon as they are taken into the Body, penetrate it throughout, passing every where to find out their Enemies, and when found Attack, and put them to flight, which gross Medicines cannot perform. The like Virtue is also in those ☿ *Salts*, Tinctures or Souls of Metals, that come over in the flame of the distilled Spirit of Wine, which also penetrate the Body throughout, chasing their Enemies before them; and the Tinctures of Stones in the same manner prepared do the like. Which we must not so understand, as if the Alcolized Spirit of Wine were to be taken into the Body, together with the Tincture, for indeed it must be separated from it. As for instance, when I have brought over the Quintessence of Flints or Crystals, with our *Alcohol vini*, and have a mind to make use of it against the Stone in the Bladder or Kidneys, or Stones that are grown in the joynts, I must not exhibit this Essence, as it is mixed with the Spirit of Wine, for if so, the good effect, that might be looked for from the Essence, would be spoiled by the great heat of the Spirit of Wine, which is the reason the same must be separated from the Essence, before it can be given inwardly. Now this Separation cannot be done by Distillation, because both would come over together. Neither can the Tincture, or Essence of the Stone, be separated from the Spirit of Wine, by Precipitation. What is to be done therefore in this Case? The only way to attain our desire is, to kindle the burning Spirit, and let it flame away under a large and capacious Helm or Head, made for that purpose; by which means the Spirit of Wine is consumed in the flame, and the incombustible Essence of Crystal remains in form of a sweet and pleasant Oyl. We are also to note, that in this burning away of the Spirit of

Wine, the *Sulphur* of Wine only is consumed, and the incombustible ☿ of Wine, being condensed in the Head, falls into the Receiver, in the appearance of a sweet Water. [*see more of this instrument in the Sixth Part of Phar. Spagyr.*]

N. B. We are to observe, that the most highly rectified Spirit of Wine, is much about half water, which water ascends with the flame, and is caught in the Recipient. Yet is not this ∇ any common ∇, but indeed a powerful ∇ of Life, especially when the Spirit of Wine hath been rectified from Aromatical, or Medicinal Subjects, but even without this, it is of very good use, because the incombustible ☿ of Wine lies hid in it, and may be separated from it, by abstracting the said ∇ in a very gentle vaporous Bath, which done, the ☿ of Wine stays behind, in the form of a white lovely *Salt*, full of heavenly Powers and Virtues: For which cause this *Salt* or ☿ of Wine, hath been always termed by the Philosophers, Heavenly *Salt*.

It is likewise to be noted, that after the ∇ is abstracted from the Spirit of Wine, the said ∇ is not devoid of all Virtue, as invisibly containing some part of the foresaid Heavenly *Salt*, especially if the Spirit of Wine in its Rectification, hath been impregnated with Spices, or other good Subjects: For according to the different impregnation of the Spirit of Wine, the Heavenly *Salt*, or ☿ of Wine, will be more or less powerful. Thus we have seen in what manner the Essences of Flints and Chrystals are to be prepared, with the help of our *Alcohol vini*.

When this Spirit of Wine Crystallized is kindled and burnt away under a large Head, the greatest part of the Essence of Crystals remains behind, in the form of a pleasant clear Liquor, which is the most

Sovereign Medicine against all Diseases proceeding from *Tartar*, *viz.* Stone in the Bladder, Kidneys and other parts of the Body, which it dissolves, and carries off. But the most pure part of the Crystals mounts with the flame into the Helm, in form of a clear Water, which when abstracted in a vaporous Bath the ☿ of Crystals stays behind, in form of a lovely white *Salt*, which is of far greater power in the Stone, Gout, and like Diseases, than the fixt Oyl or Liquor, which remains in the Vessel after the Spirit of Wine is burnt away. In like manner, we may proceed with other Stones. Yet we are to understand, that all Stones have not the same Nature or Property: Thus we find Several sorts of Crystal, *viz.* some White, Transparent and clear, others White, but *Opake* and dark, also Green, Blew, Yellow, Red, and Black Crystals, all which by the help of *Salts*, are melted into Glass of several Colours. Amongst these Crystals are also reckoned. Flints, Pebbles, Gravel and Sand, which likewise suffer themselves with *Salts* to be melted into Glass. All these forementioned Stones, may with *Alkalick Salts* be melted, and afterwards by *Deliquium* be resolved into a Liquor, concerning which Liquors, I have treated at large in the Second Part of my Furnaces.

These Stones that suffer themselves to be melted, with the Addition of *Alkalies*, may also, with Lead-ashes, be reduced to transparent Glass. Whereas precious Stones, *viz.* Diamonds, Rubies, Saphirs, Jacinths, Granates, *&c.* are of a quite different Nature, which neither by *Alkalies*, nor Lead, can be run down into Glass: Wherefore also none have been found hitherto, that have been able from them to prepare any good Medicine, as not yielding to the most Corrosive Waters whatsoever.

N. B. And though indeed, I know a way to dissolve them without any Corrosive, yet do not I think it proper, to Communicate the same in this publick manner.

There is another sort of Stones, which are commonly found in Rich and fat Earth, and sometimes also in Rivers or Brooks, such as *Lapis Judaicus*, *Lyncis* and others, which being not very hard, may be dissolved in good Spirit of Salt, which Solutions are by some of our common *Chymists* used against the Stone, but without any good Success, forasmuch as the Body of the Stone is not at all meliorated by being dissolved in Spirit of Salt, but rather made worse; because by this means, there is no Separation of the pure from the impure. But if any Man will take the pains to reduce these Stones into Essences, in the way before specified, he will find them much more available in all sorts of *Tartarous* Distempers.

There are also several kinds of Lime-stone, which cannot be melted with Addition of *Alkalies*, or the Ashes of Lead, but by a strong Fire are burnt into Lime. Amongst which Lime-Stones, we may reckon the *Ludus* of *Van Helmont*, which like other Limestones, may be sublimed with our strong ♓, and afterwards reduced into a Liquor, of which I have treated elsewhere, and particularly in the Seventh Part of my *Pharmacopœa Spagyrica*. Out of these Stones, after they have been first burnt into Lime, a most excellent Medicine may be prepared against all kinds of the Gout: *Basil Valentine* assuring us, that he with Essence of quick Lime, cured the Chancellor of the Emperour of *Germany* of the Gout: Which we may the rather believe, because *Basil Valentine* knew the way of separating the ☿ from the Spirit of Wine,

by enkindling it; and hath also described an instrument of Copper, for performing that Operation: And knowing all this, he could not be unacquainted, that the Essence of Quick-lime, being united with Spirit of Wine, and afterwards meliorated, and putrified by burning it away, was separable from it, which he having reduced to Practice, obtained this excellent Medicine for curing of the Gout.

We are further to know, that there be other, and better Stones, to prepare an universal Medicine against the Gout and Stone, by means of our *Alcohol vini*, after they have been first burnt into Lime, *viz.* Oyster shells, which, being burnt afford a Lime that is very Caustick; and of a like Nature are all Sea-productions, *viz.* the Stones that are found in Spunges, all sorts of Coral, Pearl, and Mother of Pearl, all which may be reduced by Fire, into a Lime of great and excellent use.

But above all other Stones, I esteem those that are found in Beasts, Birds, Fishes or Man, which being reduced into a Calx, and their Essences extracted with our *Alcohol Vini*, may then be brought into a pleasant Liquor of great Use.

Amongst Fishes, the best Stones are found in Haddocks and Whitings, Crabs Eyes also are very good, but must be calcined before they can be of any good use in Physick; for without that, they are more proper to generate the Stone, than to expel it.

Having thus declared, how, from some Stones, good Medicaments may be prepared against the Gout and Stone both of the Bladder and Kidney; we will next shew, what kind of Stones are proper to be extracted with our *Alcohol Vini*, in order to the obtaining of true Tinctures for Men and Metals. For all Stones that have good fixt colours, are not

therefore fit to have their Tinctures extracted; because some of the Precious Stones are too costly, though we should only make use of their Fragments. Some will not submit to any Operation, *viz.* Granates, Saphires, Rubies, Jacinths, Emralds, Turkoises, *&c.* though they abound with much fixt Tincture; whereas all those Stones which are high of colour, and suffer themselves to be dissolved, are proper for this work, because without preceding Solution, it is impossible to extract the Tincture from hard and compact Bodies: Wherefore we must make choice of Stones that are soluble, and abound with fixt Tincture, *viz.* Green and Red Jasper Stones, *Lapis Lazuli*, and the Black *Magnesia* which contain abundance of Solar Tincture. All Stones likewise that are high coloured, and break smooth like Glass, whether found on Mountains or in Brooks, are good for this purpose.

It was because of this Solar Tincture abounding in the Jasper Stone, that the Ancients preferr'd it before ☉, as containing a most high and excellent Tincture. A very rich Tincture may also be extracted from the *Lapis Lazuli*; and from the Black *Magnesia*, (which is not costly) a richer. Let us therefore take this despised Stone in hand, and see how easily its Tincture, by means of our *Alcohol Vini* may be extracted, and what uses it serves for, as well in Physick as Alchimy.

The PROCESS.

℞. One pound or two of black and ponderous *Magnesia*, pulverize the same, and dissolve it in our Universal Stone-Water, wherewith all hard Stones

may be dissolved, and thou wilt have a Solution of a Grass-green-colour, filter it, and in case thou hast proceeded aright, the undissolved *fæces* will be of small quantity.

Now is thy Solution ready to have our *Alcohol Vini* pour'd upon it, in order to the extracting of its Tincture, and carrying it over the Helm.

N. B. That notwithstanding the Solution be at first of a green colour, yet the Spirit of Wine in Distillation comes over yellow as *Sol*. And when the Spirit of Wine is kindled under a large head, the pure *Mercury* of the *Magnesia* ascends with the flame, which is of great use in Physick; and a Blood-red Liquor stays behind, being not only a Tincture for the Bodies of Men and Metals, but also by means of the same may Crystals be tinged with several fair colours, so as to resemble Precious Stones in all things, except hardness. I dare not set down here the manner of applying this Tincture to white Metals, he to whom God vouchsafes this Tincture, will easily find out the use of it.

As to the Physical use, this Tincture opens Obstructions of the Liver, Spleen and Lungs: The white *Mercury* come over with the Flame is an excellent Medicine, strengthening the Heart, Stomach, Head and Reins, and a great Remedy against the Gout. In a word, he that is Master of this Tincture will find much more in it than I have here hinted.

In like manner, as hath been said of the *Magnesia*, we may proceed with other Stones, to extract their Tinctures, all which have different properties, according to the nature of the Stones from whence they are prepared.

We proceed now to shew, how by means of our *Alcohol Vini* the Tinctures or Essences of Minerals and Metals, without any preceding Solution, or other preparation, may be easily brought over. The way is thus:

℞. What quantity you please of any Sulphurous Marcasite, whether of ♂, ♀, ♃, ♄, ☽ or ☉, make them red-hot in a Crucible in a Wind Furnace, and then put them red-hot as they are, into my second Distilling Furnace, fitting a large Recipient thereto, and pour upon them to the quantity of about an Ounce of our *Alcohol Vini*, closing the Furnace again immediately; by this means the Spirit of Wine will enter into the Stones, yet because of the great heat will not long continue there, but ascend and carry over the Metalline Spirit with it; which done, pour upon them another spoonful of Spirit, which when come over, pour on another, repeating this as oft as shall be needful. After that the Marcasites or Metalline Stones are grown cold, they must be made red-hot again, and proceeded with as before, till a sufficient quantity of the Metallick Spirit be obtained. Then burn away the Spirit of Wine, and there will remain a glorious Essence of Metals, which thou mayest make use of, according to thy best knowledge. One thing I can assure thee, that this is the easiest way to obtain Metallick Spirits in quantity. And though the Process appears plain and simple, yet more may be discovered and attained thereby than many would imagine. I know what I write, though it may be every Man will scarcely understand me; which is very fitting, to the end these great *Arcana* may not be prostituted to the Unworthy. He, who cannot make Metallick Spirits according to this way, may dissolve the Metals themselves in proper Dissolvents, pour Spirit of Wine

upon them, and distil their Essences, which he may then make use of, as his understanding shall guide him.

I have already declared, that Metallick Spirits, when pour'd together, do Meliorate one another. I shall add no more at present, having already declared too much to the Unworthy, and for those that fear God, they will be further assisted from above, and led to the desired end.

In like manner may the Essences of all common Stones, Pebbles, Metalline Stones, colour'd Earths, *&c.* be extracted without any foregoing preparation; for which God be praised for evermore. *Amen.*

In the same way we can obtain the Essences of many other Mineral Subjects, without any preceding preparation, especially of such as are Volatile, *viz.* Kobolt, Arsenick, Orpiment, Bismuth, Zink, *Lapis Calaminaris*, and the like Realgars, from which we may distil very poisonous, but withal admirable, Spirits, in order to the Melioration of Metals. We may also take the same course with compact Metals themselves, and distil their Spirits without any foregoing Solution, *viz.* we must file them small, make them red-hot, and put them into the Distillatory, and then proceed as before hath been said with the Marcasites, and the Metalline Spirit will come over with its natural smell, taste and colour, in which Spirits great wonders lie hid, but are of greatest use in Meliorating of Metals. Read what *Paracelsus* writes to this purpose in his Book called *Vexatio Alchymistarum*, where you'l meet with what will satisfie you in this matter. Consider well of what I have said, and thou wilt find more than I dare set down; for it is no small or common thing to obtain the pure Souls of Compact Metals, without any

foregoing Solution of their Bodies.

N. B. Those Metals which are molten with Minerals, being filed, and proceeding with them as aforesaid, afford a Spirit higher in colour, and of a stronger smell than simple Metals. Take an instance from Brass, of which if you lay a piece upon a red-hot Coal, it will send forth a bad stench, or put Coals into a Brass Chafing-Dish, and you'l perceive the same; which bad smell proceeds from the *Lapis Calaminaris* which is joyned with the Copper, the said *Lapis Calaminaris* being a volatile and stinking Mineral. So likewise when ♀ is made white by the addition of Arsenick, it stinks much worse than when it is join'd with *Lapis Calaminaris*, as being much more poisonful. This stinking fume which proceeds from Brass, though it be a Spirit, yet is not without a Body, and may be called a spiritual Body, or Bodily Spirit. These fumes are hurtful to the Brain and Heart; and therefore a wise Man endeavours to catch this Volatile Spirit, and to turn it to a true fixt Tincture, fixing white Metals into a permanent Yellow; as the stinking fume of White ♀, made so by *Arsenick*, may be reduced to a Tincture, which will tinge Red ♀ into White.

I have said enough here, he that hath ears to hear, let him hear. He, who desires to know more concerning those *Metallick* Odours, may read *Braceseus*; where he will find, that from them the Philosophers Stone, or highest Medicine against all Diseases of Men, and Metals may be prepared: Of which, elsewhere I may have occasion to treat further.

It remains now to discover, in what manner the Medicinal tinging Spirits, or Souls of Stones, are to be extracted, wherewith great Honour and Riches

may be obtained in the Practice of Physick. The Process is the very same, as with the *Marcasites*; for when white Pebbles and Chrystals, or colour'd Stones, as *Jasper* Stones, *Lapis Lazuli* and the like, being first made red hot, have our *Alcohol Vini* poured upon them in a convenient Distillatory, the Spirit of Wine carries over their several Colours, which Tinctures are of great use in Physick. In this way, we may get a Spirit from Lime stones, which is most subtil, and strong of any other whatsoever.

As for Corals and Pearls, they are not to be made red hot (because their Virtue is destroyed by strong Fire) but only heated, and pour Spirit of Wine upon them, by which means the Spirit of Wine will bring over the Essence of Corals of a curious red Colour, and that of Pearls white as Milk.

The Stones that are found in Fishes, Crabs eyes, so called, need only to be pulverized, without heating them, and in abstracting the Spirit of Wine from them, we obtain all their Virtues, which Spirit of Wine being afterwards separated there from, as I have taught, or according to my new invention burnt away, we shall get the true Magistery of these Stones, being a pleasant *Salt*, full of Virtues, and without any thing of Corrosiveness. This *Salt* is the true Magistery of these Fish-stones. The like true Magisteries may, without the assistance of any Corrosive, be prepared of Coral, Pearls, Mother of Pearl, Cockleshells, and the Egg-shells of some particular Birds, as also of soft Stones, such as *Lapis Lyncis*, *Judaicus*, *&c.* Let no Body think strange, that I make mention here of Egg-shells, amongst the rest; seeing it is certain, that they have their Original from Stones, as Experience teacheth us, for when Hens are coop'd up in the Winter time, in places where they

cannot meet with Sand, or small Stones, they lay Eggs without shells. Wherefore Egg-shells are not to be contemned, for when according to my Instructions they are reduc'd to Magisteries, they are of great use in curing the Stone and Gout: And are used with extraordinary Success, to hasten the Birth in Women, strengthning both Mother and Child, and helping to expel the After-Birth.

Swallows Egg-shells may easily be had, forasmuch as after they have hatch'd their young, they cast them out of their Nests, and afford an excellent Medicine against the Falling Sickness. The Egg-shells of the Wag-tail would be yet more effectual to this purpose, if they could be got, for no Bird is subject to the Falling Sickness, but it: For being caught, and running about with other Birds in the Winter, it's oft seiz'd with the Falling Sickness, his Feet stagger, his Head and Tail tremble, and at last falls on his Back, but continues not so long, for rising again, he plucks out some of his Feathers, and thereupon immediately recovers, and runs about, eats and drinks as before: Of whose Feathers, since their Egg-shells are not to be got, a Magistery may be prepared against that Distemper.

They who know, that great Virtues are contained even in natural superfluities, will not wonder at my treating here of Egg-shells and Feathers. Some great Philosophers have set down the way of making the Philosophers Stone of them; amongst the rest, a certain Author, writing concerning Mans hair and Egg-shells, concludes thus: *Though these matters may seem to be very strange and absurd, yet who is there that knows all things*, &c?

Many other Subjects might be hinted, from whence Magisteries may be prepared, but I think it needless,

he who sets upon the work will easily find many more, than I have mentioned. I shall only, by the way, take notice, that the common Magisteries of the *Apothecaries* Shops, are no Magisteries, but mere dead, unprofitable Powders.

We now proceed to the Preparation of Vegetables and Animals, which being of different Natures, must also differently be prepared. As for Instance, *Opium* (which is a tough Juice, and cannot be pulverized) must be cut in thin slices, and laid on a Tin Plate before the Fire, or any other convenient way, to be dried, and then powdred; which done, we must pour upon it some of our *Alcohol* of Wine, and after a short digestion distil it, by which means we shall get it's most subtil Essence; and, if afterwards we burn away the Spirit of Wine, part of this Essence will ascend with the *Mercurial* Water, and other part stay behind. The former of these, *viz.* the Volatile *Mercury* of *Opium* is so powerful, that when only smelt to, it is of better effect than the common *Laudanum Opiatum* taken in substance. The Red Liquor, which remains behind in the Cup or Dish after the Spirit of Wine is burnt away, may be taken inwardly. That which remains in the Glass Body after Distillation is of no great use, and may be cast away; yet if any one will take the pains to dissolve it in common ∇, filter, and after reduce it to the consistence of Pills, perhaps he will not find it much inferior to the common *Laudanum Opiatum*. The Oyl which remains in the Cup is of very excellent Virtue, as having past the Purgatory Fire of the Spirit of Wine, whereby it is much corrected: Wherefore also we find, that this Oyl is wholly devested of that loathsome Smell that is in *Opium*. But yet the *Mercurial* Virtue, which ascends together with the Flame, is far better than that which stays behind, not only in Virtue, but

because being in the form of a clear ∇ without Taste or Smell, it may with the more ease be taken by the Sick. The said Oyl may also with Saffron, and the Narcotick ♃ of the *Vitriol* of ♀ be thickned and reduced to the Consistence of Pills.

This Medicine is of great use, for such as are in pain, and want their due Rest, removing the one, and procuring the other: And no Body can be ignorant, how necessary Sleep and Abstinence are, to preserve Health, as well as to remove Diseases.

According to this way, we may extract the Virtues of all vegetable Subjects, and greatly exalt, as well as correct them, where need is.

N. B. Henbane and *Tobacco*, this way prepared, afford *Narcoticks* not inferior to *Opium*. *Aloes*, *Myrrh*, and *Saffron* handled in this manner, make an Elixir *Proprietatis*, ten times better than that described by *Paracelsus*, or *Helmont*: For our *Alcohol Vini* brings over only their purest Essence, which is afterwards yet further exalted through the Flames of the Spirit of Wine. According to this method, a Man may prepare from Vegetables excellent Cordials, *Cephalicks*, strengtheners of the Stomach, *Nephriticks &c.* which in their effects will far exceed the Common. Only we are to observe; that when we have a mind to prepare an universal Medicine, we need not to meddle with Vegetables or Animals, which are Grandfather *Demogorgons* green Cloak, forasmuch as a little piece of his Heart, is far more valuable than his whole Cloak; wherefore he that would prepare an universal Medicine, of greater Virtues than all Vegetables and Animals contain, let him take to Task a part of this *Demogorgons* Heart. Concerning which, if the Reader desire further to be satisfied, let him peruse a Treatise of the

incomparable Philosopher *Joannes Bracescus*, *of the Tree of Life*; where he may be informed, who this *Demogorgon* is, what his clothes, and what the inmost Blood of his Heart are.

Now by the way, to speak a little of this *Demogorgon*, we are to understand, that the Ancients always described their universal Work, not plainly so, as to be apprehended by every one, but wrapt up in Riddles and Allegories; all of them pointing to this *Demogorgon*, who has his Seat in the Center of the Earth, having a rusty Colour'd, and green Cloak cast about him; which in plain terms, is nothing else but the Central Fire, which God, when he created the World, placed there as an everlasting vivifying Fire; by means of which quickening Fire, not only Metals and Minerals are produced, but also all Herbs, Plants and Trees: Upon which Account, the ancient Philosophers have described this *Demogorgon*, to be the Grandfather of all the Heathen Gods, that is *Metallick* Subjects, and an Upholder of, and Provider for all things that are within, as well as without the Earth; for all things proceed from one Original, *viz.*, this *Demogorgon*. Concerning which, *See the Twelfth Treatise of* Sendivogius.

Metals and Minerals, are as it were the Shirt, or inmost covering of *Demogorgon*, whereas Vegetables and Animals, are but his Cloak, or upper Garment. The Ancients have writ much concerning this *Demogorgon*, attributing to him, not only the Generation and growth of Stones and Metals, but declaring him to be the Father of those living Spirits, which are often found in the Mountains, where Mines are, especially of ☉ or ☽, about which, if the Reader desire to be further satisfied, let him read George Agricola *his Treatise concerning Subterraneous*

living Creatures.

To return then to our *Demogorgon*, I say, there are found some contemptible Minerals, in which all the Virtues of Vegetables and Animals lye concentred, which Minerals take their Original from the purest Heart-blood of *Demogorgon*: Such Minerals as these we are to take in hand, if we would prepare an universal Medicine against all Diseases, as well as a Tincture, to meliorate all white Metals with great Gain and Profit. We are also to observe, that such an universal Medicine, may easily, with little Charges, and in few days, be prepared: For the Minerals themselves cost little or nothing, the Dissolvent is very cheap, and the burning Spirit is not Chargeable, so that an Universal Medicine, to meliorate Vegetables, Animals and Minerals, may be made with the Charge of an Angel, which, certainly, is a strange and wonderful *Compendium*. All this may be done with the help of our Spirit of Wine *Alcolisatus*, without which, the Essence of these Minerals cannot be brought over, nor be made perfectly sweet and fine, without enduring the Purgatory of its refining Flames: Wherefore, also our *Elias Artista*, or *Salt* of Art, wherewith we acuate our burning Spirit, and make such a wonderful *Menstruum* of it, may well be called the Monarch of *Salts*. And to demonstrate, that such a Medicine prepared of Metals or Animals, with the help of our *Salt* of Art joyned with Spirit of Wine, is not only able to cure all the Diseases of Men and Metals, but also of Vegetables, appears first from hence, that an universal Medicine can scarcely, or at all be prepared without the Concurrence of Vegetables and Animals: For which reason the Philosophers say, that their Stone is Vegetable, Animal and Mineral; if then the universal Medicine be made up of these three, we must conclude also,

that it is Master and Commander over them. The use of this Medicine in the several three Kingdoms, is as follows. When by means of our *Tartarized* Spirit of Wine, thou hast brought over the pure Essence of a Metal or Mineral, and separated the Spirit of Wine from the *Metallick* Essence, by burning it away, then the said Essence stays behind in the Cup or Dish, wherein the Spirit of Wine was burnt away, and may without any other Preparation be made use of, for the Cure of all curable Diseases. But when we have a mind to make use of this Essence, for the meliorating of Metals, we must first ferment it with common ☉ or ☽, for without this, the Soul or Quintessence of Metals can have no ingress into Metals, so as to unite with them in a Fire of Fusion. We are also to note, that when this *Metallick* Essence is fermented with *Sol*, it becomes a *Solar* Tincture, but when with ☽, it only affords a white Tincture. It is also to be observed, that when we take two parts of ☉, and one of ☽ for our ferment, we shall have a Red Tincture, and so on the contrary, if we make use of two or three parts of ☽, to one of ☉, it will only be a white Tincture, because the predominant Metal determines the Tincture. But he who hath once obtained a well prepared Quintessence of Metals, will easily know the ferment and way of applying it, for a due application is of great moment in this matter. I have known some, who had extracted good Tinctures from ♂ and ♁, but understood not the way of fermenting them, that is of joyning their ferment without their Tinctures; neither did they understand the Inceration, that is, the way to give to your Tinctures easie Fluxibility and Ingress, so could not arrive at their desired End. Were the World worthy of it, I could set down an easie, cheap and short way, to extract much ☉ out of ♀, by which means every one

that is somewhat skilled in Distilling, Melting and Cupelling, might have a Rich and inexhausted Mine in his own House, but it is much better to be silent, than to strengthen Men in their Pride and wickedness.

But to return to the Medicinal use of our Tinctures, we are to take Notice, that the Red Oyl, which remains after the burning away of the Spirit of Wine in the Cup, is fittest to make a *Metallick* Tincture of: But the ☿ or Celestial *Vitriol*, which mounts with the Flame of the Spirit of Wine, is the most proper Medicine for human Bodies: For this pure *Mercurial* ▽ is the true and best ▽ of Life, wherewith, not alone Men, but also other Animals, yea and Vegetables too, may be cured of all Diseases, and Evils incident to them. And forasmuch, as the highest Medicine of Vegetables is the Nourishment they draw from the Earth, the warmth of the Sun, and fruitful Rain, and that on the contrary a dry and barren Soil, and want of the cherishing heat of the Sun and Rain, are the Death of all Vegetables, it is apparent that there can be no better Remedy to keep off the Death of Vegetables, than this our sweet cherishing, and vivifying ▽ of Life, or Celestial *Salt*: For when any Seeds of Vegetables are steeped therein, and set only in Sand, they immediately shoot up and grow: And having this effect upon Vegetables, we have the less reason to doubt of its cherishing, and vivifying Virtue on human Bodies, as indeed there cannot be a better Medicine to rid the Body of Man, of all manner of Diseases than this Universal Blessed ▽ of Life, or heavenly Rain ▽. When we attentively consider Nature, we find, that the Life and growth of all Vegetables, Animals and Minerals, is Originally from the Air, or an Airy volatile Spirit. Thus we can make all hard Stones and Metals grow as it were in a

moment, by means of such a volatile Spirit, concerning which, I have spoken in the Second Part of my Furnaces.

This sudden growth of Stones and Metals, I have many years since shewed to some of my Friends, who greatly admired the same, but could not comprehend that reason thereof. Now therefore, to satisfie the Searchers after truth, I declare, that all growth, whether in the *Microcosme*, or *Macrocosme* proceeds from a Spirit, or Volatile *Salt*, arising from two contraries, *viz.* an *Acid* and an *Alkali*; for when an *Alkali*, and an *Acid* Spirit meet, they cause an Effervescence, during which, there proceeds from them both a very subtil Spirit, which has the Nature and Property to make all things grow. If a Man takes this Spirit inwardly; it procures and preserves health; if it be joyn'd to an Herb, it makes it to grow and shoot up suddenly. With this Spirit we can make an Herb grow from its Seed in the midst of Winter, (but it must be in a warm Room,) so as it may be seen to grow; which my self have performed more than once. And to make it appear, that this swift growth only proceeds from a volatile Spirit, produc'd by the strife of two contraries, I'le give this instance; pour one Pound of Oyl of *Vitriol*, upon one or two Pound of calcined *Tartar*, not at once, but by degrees, and at several times, and it will cause a great strife and Effervescence, cover the *Cucurbit* with its Head, and give Fire in a Sand Furnace, by which means a very subtil volatile Spirit comes into the Receiver. If before this Work be undertaken, a Stone hath been dissolved by the calcined *Tartar*, and a Metal in the Oyl of *Vitriol*, then the Spirit, which proceeds from them, will be much more powerful; because the Virtue both of the Stone and Metal comes over with the Spirit. In this manner may a volatile Spirit be had

from all *Acids* and *Alkalis*.

To demonstrate this further, that the growth of all things proceeds from the strife of two contraries, take this instance: Dissolve some Iron or Copper in Spirit of *Salt*, or Oyl of *Vitriol*, draw off the Flegm, in which Distillation none of the *Acid* Spirit will come over; because it is joyn'd and concentred with the Metal, animating and disposing it to shoot up and to grow swiftly, so as the eye may perceive it grow, like a Tree with a Body, Boughs, Branches, and Twigs. Take this Spirit of *Salt* or *Vitriol*, concentred by the ♂, as soon as you have taken it out of the Furnace, whilst it is yet warm, and break it into little Bitts, about the bigness of large Pease (if you should suffer it to grow cold, it would by attracting the Air, suddenly run into an Oyl *per deliquium*.) These pieces of animated ♂ must be joyned with its contrary, for which you can choose nothing better than a Liquor of Flints prepared in the same manner, which I have taught in the second part of my Furnaces. The Glass, wherein you put this Liquor of Flints, must be of the same wideness at the top, as at the bottom, and about an handbreadth high, and fill'd with the said *Alkalious* Liquor, to which, put your *Acid* concentred by the ♂, laying the pieces orderly a thumbs breadth from one another, and place the Glass, where it may not be shaken or jogg'd. As soon as these contraries are thus joyned, they begin to act upon one another; but forasmuch, as the one of these contraries is concentred by the ♂, and become hard, it cannot mingle it self with its adversary, or destroy it, so they only vex and anguish one another, in doing which, a warmth ariseth between them, and the one contrary pusheth the other to shoot and grow; the hard and dry part, *viz.* the animated ♂ drawing so much moisture from its contrary, the Liquor of Flints, as

makes it heave and begin to grow in form of a Plant, with Root, Stock, Branches, and Twigs, very pleasant to behold, the growth being very swift, so as within an hour and an half, or two hours at the most, the whole Glass is fill'd with little iron Trees, which grow harder and harder, and when they are hard enough, (which will be in the space of twenty four hours) then the Liquor of Flints must be let out from it through a hole, left on purpose in the bottom of the Glass, and the Plant, or little Tree, remains. If we desire to make a more pleasant sight of it, we may take several Metals, and make them grow up like a Tree; ♂ affords a dark brown, *Venus* a green, ♄ ♃ and ☿ a White and Grey, ☽ a Blew, and ☉ a Yellow Colour. Minerals also give different Colours from Metals; *Lapis Calaminaris* grows not into Trees, but into the resemblance of Mountains and Rocks of a White and Greyish Colour.

If we have a mind to make Stones to grow, we proceed thus, first we melt the Stone, whether White or Coloured, into a transparent Glass, and pour it forth into a Copper Bason, where it will flow broad and thin, and will be the fitter to be broke into as small pieces as we desire. Which peices we place as before in a flat bottom'd Glass before described, which must be full of an *Acid* Spirit mixed with water, so as it may neither be too sharp, nor too weak; for if it be weakned with too much water, it will not retain strength enough to make it grow; and if the *Acid* be too sharp, it will dissolve the *Alkalized* Stone, wherefore great care must be taken, as to this particular.

N. B. The *Magnesia* gives a Blood-red Tree, and much more beautiful than any of the Metals: Only observe, that Metals may be made to grow with less

trouble than Stones.

From what hath been said, it appears beyond dispute, that the growth of Vegetables, Animals and Minerals (Stones not excepted) proceeds from two contraries. I could easily make this out more amply and fully, but having treated of the same in other parts of my Writings, I shall let it rest here.

An Appendix or COROLLARY.

I have in the foregoing Treatise declared the use of the *Salt* of Art, both in Physick and Alchimy, and have set down nothing, but what my self have experienced. What I have writ concerning our *Alcolized* Spirit of Wine, is also the very truth: And tho' what I have here set down might seem to suffice; yet I cannot, before I conclude this small Book, but mention a much greater Gift of God, than that of which I have spoken here, *viz.* that God hath vouchsafed Mankind, for preserving their Health, a Subject, wherein the Powers and Virtues of all Vegetables, Animals and Minerals, are summ'd up and united together; which Subject may be had in all places for nothing, and however contemptible it may seem to the ignorant, yet it is the matter of the highest Medicine in the World. Every Man can have enough of it from himself, needs therefore not to go to another for it. *Adam* and *Eve* our first Parents brought this matter with them out of Paradise; yea, every one brings it along with him from his Mothers womb.

Let no Man imagin, that I speak here of Urine, or Mans Dung, it is something else, and more despised

than either of them, so that a proud Man will scarcely light upon it. I say, if a Man know this Subject, and how to make use of it in Physick, he may well account himself happy, as needing nothing of all that is in the World besides, in Case he hath only strength, place, and convenience to prepare the same. The Subject costs nothing, and the Preparation requires neither Glasses, Coals nor Furnace. I commend this Subject to Physicians above any other in the World, the Preparation being easie, and without Charges, and may be finished in few days: So that the knowledge of this Subject, and its easie Preparation, ought not to be look'd upon, as an invention of Man, but as a wonderful, and undeserved Gift of God, reserved only for those, who despise the World with all its Vanities, renounce the Devil and all his Works, and avoid the Company of wicked Men, his adherents.

Of the Three most noble STONES generated by Three Secret FIRES. AND,

First, Of the Stone of Philosophers, which is prepared by the Secret Fire of the Wise.

Secondly, of the upper and lower Thunder-stone, how they are generated above, by the Meteorological Fire; and below, by the secret Artificial Fire. And,

Thirdly, How the Lapis Ignis*, or Fire-stone of* Basilius*, is to be prepared out of* Antimony *by Art.*

And how these Three most noble Stones of the World, are to be used in Physick and Alchymy. Translated out of the High-Dutch.

Reader,

In the end of the Appendix to the Seventh Part of my *Pharmacopœa Spagyrica*, I have made mention of Three Fires, which are not Common, but unknown to the World. By which are generated three wonderful Stones, which I did intend to publish. First, of the secret Fire of Philosophers, commonly called the Fire

of *Artephius*, because *Artephius* a very ancient Philosopher did first write of it, who was also envious like others, and would write nothing of it, till he came to be nine hundred Years old which way the Philosophers Stone was to be made by this Fire. These Writings have been long tossed up and down the World, before any could be certain, whether or no this miraculous Fire could be found in Nature. At length some Philosophers attain'd its knowledge, and published it for the good of the World. But because, those Philosophers were very obscure in their Writings, the Art could not be made common, but remaineth secret to this hour: So that one of a Thousand among the now reputed Philosophers, (who have fill'd the whole World with their unexperienced Writings) scarcely one is to be found, who know any thing of it. And because this secret Fire was called by the true Philosophers, *Ignis Philosophorum*, it would have becomed them, to know somewhat of it. *Helmont* the most experienced and learned Philosopher of his time, although he had studied long in the Universities, yet he doth not Glory in any Arts he there learned: But on the contrary, he saith, that Physick, as it is taught in the Schools, is of no value. And, that not the Universities, but the Fire, made him a Philosopher. And therefore, he calls himself a Philosopher by the Fire. And without doubt, our secret Fire was known to him, as appears by his excellent Writings. For his *Elementum Ignis Veneris*, to which he attributes so many Virtues, could not well be made, without this secret Fire. A Quintessence may be drawn out of *Venus*, but that will not effect, what the Red Element of the incombustible *Sulphur* can. *Paracelsus*, in his Book of *Sulphur*, writes, that an excellent *Elementum Ignis* may be made out of common *Sulphur*, which he

so highly commends, that he dares to say, that except a Physician hath this Element of Fire, (that is the fixed Quintessence of *Sulphur*, among his *Arcanums*, he cannot rightly be reputed a Physician, but a Money Catcher, and Robber of the Sick. In my lately published Treatise of *Sulphur*, I have also described an *Elementum Ignis*, which is certainly a very excellent Medicine against all Cold Distempers, but this is not yet fixed, but combustible, but the Element of Fire ought to be incombustible. For as long as a Medicine made out of *Sulphur* is still combustible, and subject to blacken Silver when touched with it, it cannot be reputed the true *Elementum Ignis Sulphuris*. For the true Element of Fire of *Sulphur* doth not make Silver black, but tingeth it with a constant Golden Colour, which cannot be washed off. As also, the Element of Fire ought to be of this Nature, to enter a Red hot Plate of Silver without fume, as Oyl sinks into dry Leather; and to tinge it Yellow. Also, it ought to tinge common ☿ into Gold, when added to it in a due heat. This Quintessence of *Sulphur*, also must not be burnt by the Fire as other Oyl, but remain incombustible. Therefore, the Philosophers have called it an incombustible Oyl, a permanent Water, *Aurum potabile*, *&c.* When it hath those Virtues, then it can perform what *Paracelsus* attributes to it, *viz.* Wonders both in Physick and Alchymy; and by this, *Aristotle* and his followers (who assert, that the Species of Metals cannot be transmuted) are quite out of Doors.

It is true, *Aristotle* also saith, that the Metals cannot be transmuted, if they be not first reduced to their first matter, of which I have sufficiently treated. This our fixed Oyl of *Sulphur* transmutes the Metals without any precedent reduction of them to their first matter. For our secret Fire hath taken away

whatsoever was pernicious or combustible; so that only the purest and incombustible part remains, by which such great things in Medicine and Alchymy are performed, that it refuteth all those who speak against it; although many Impostors by their cheats, from place to place, have given occasion to speak evil of the Noblest of Arts; which hath had an ill effect heretofore upon my self.

An History of the Poisonous Tayl of Common Alchymy.

Here follows a large Historical Digression of some great Abuses which the Author some time underwent, but pertaining nothing to the scope of this Treatise, I will not trouble the Reader with it.

Now concerning our secret Fire, it is not made of Coals or Wood, or other combustible Matter, but compounded of certain Fiery Waters, which burn, but not like other Fires without the Glass, but always within the Glass; wherefore *Artephius*, as the first Author of the secret Fire, useth these words. *Our Fire is Mineral, Equal, Continual, it Vapours not unless it be too much stirred up, it partakes of* Sulphur*, and is taken elsewhere than from the matter; it pulleth down all things, dissolveth, congealeth, and calcineth, it is artificial to find; it is a short way without cost, at the least with small cost; it is moist, vaprous, digestive, altering, piercing, subtile, Airy, not violent, not burning, compassing or environning, containing but one, and it is the fountain of living Water which goeth about and containeth the place, when the King and Queen hath themselves.*

This is *Artephius*'s Description of the Fire of Philosophers. *Pontanus* hath also wrote of this Fire, to whose Epistle I refer the Reader for the more easie introduction to it.

Artephius hath here plainly enough described the Matter, and the *Mercurial* Water, and *Pontanus* hath confirmed it. He to whom God will give it, will easily comprehend it; but *Artephius* and *Pontanus* teach nothing, but how to ripen the Stone of Philosophers compounded of Gold, Silver, and *Antimony*, by this secret Fire. But because several others as well universal as particular are to be easily prepared by this our Fire, I think fit to say somewhat of it. Our Fire, maturates whatsoever is put to it, whether Vegetables, Animals, or Minerals, and therefore our Fire, as also the Matter of the Philosophers Stone it self, is called Vegetable, Animal, and Mineral; as also a natural, non-natural, and supernatural Fire. He who is not satisfied with this may read *Artephius* himself, where he will find more of this our secret Fire.

Now having understood what *Artephius* and *Pontanus* have written of our secret Fire, I could not but describe it somewhat more openly, to shew the Artist a nearer and easier way to obtain it. I *Glauber* can truly affirm this, That in my young days I have travelled many Countries, and diligently searched for an Experienced Philosopher, that might teach me some good. But I no where found my desire, but I often found some diligent Physician, who following *Crollius*, *Hartman*, *Beguinus*, and other Experienced Physicians, prepared their own Medicines, by which they gained Honour and Wealth, and were therewith content. Some of them had indeed read *Artephius* and *Pontanus*, but had not light enough to understand them. I have also endeavoured to frequent the elaboraories of Princes, to learn something there. Indeed I found Processes enough there, which were sent from great Men. By following of which, and working in *Arsenick*, *Orpiment*, *Cobalt*, *Cinabar*,

Mercury and the like Minerals, I drew a great deal of Poison into my Body, till at length I grew weary of it, and therefore set my mind upon *Spagyrick* Medicines, by which I have found many curious Secrets, and gain'd a sufficient Livelyhood. But yet at the same time, I attentively read the Writings of the Philosophers, and out of them learned many good things, chiefly *Basilius*, *Braceseus*, *Neusementius* and the like good Authors; but the secret Fire of *Artephius*, or the proper Agent, I could not Learn, I have often Discoursed of it with Learned men, but always found, that they understood less of it than my self. For they had not read the Ancient Philosophers, but had spent their time in getting of Money, and sending their Receipts to the Apothecareis Shops. But after a light was enkindled in me from above, and I began to know this secret Fire, I began to have an aversion to the tedious, and troublesome work with Glasses, therefore I set it all aside, and now find my self more at ease, by this Capital work, for I make no further use of Furnaces, Glasses, or Coals, but can now do more and greater things in half a Nutshell or Eggshell, than I could before, with all my Furnaces, Glasses and Coals, for which I give incessant thanks to God, who is the giver of all Good. This I was willing to add, *viz.* that our Fire is hard to be found, but easie to be made, when known. Concerning the Matter, it is not always the same, but may be taken after several ways, yet according to the true proportion of the Fire, for this is all in all, the proper Agent must be only excited by our Fire, and carried on to the promoting of the Maturation of our Matter; for the proper Agent is here as much concerned, as the fire it self, for that alone could not work sufficiently to prepare an unripe Mineral by it self, without the help of the proper Agent, in so short a

time, into a Tincture constant in the Fire, or universal Medicine. Now whoever hath a mind to do any thing with our secret Fire, must have constancy of mind, tarry at home, and beg assistance of God, whose Blessing he must wait for with Patience.

Now concerning the farther use of our secret Fire, it is thus, that all Vegetables, as Herbs, Roots, Seeds, Woods, *&c.* and all Animals, none excepted, together with all Minerals and Metals, may without Cost, be easily brought into excellent Medicaments, particularly. For our Fire *Maturates* the purest *Anima*, or Quintessence of all things. Poysonous Subjects are converted into Medicine, sowr and bitter into pleasant and sweet. The immature is ripened; and our Fire can be better compared with nothing, than with the Sun, which gives Life to all Vegetables, Animals, and Minerals, and makes the imperfect, perfect, nothing excepted. In fine, Our Fire is the greatest and most noble in the World, the Sun excepted: But God is above all, the Lord of the Creation. But what need I say much of the Melioration of Vegetables, Animals and Minerals, by our secret Fire, I have said enough, if I should say more, it would render it too Common.

But thus much it will be necessary to add, *viz.* what the Subjects are, which are the most easily wrought upon by our Fire. Among Vegetables, Wine, and what pertains to it is the best; Among Minerals, *Antimony* and *Mercury*, which is our living Gold; Among Animals, Man, and what appertains to him. You have your own choice to chuse, which you will, you have sufficient Advice, and want nothing more, but the Blessing of God, without which all is in vain.

Here followeth the Composition, or Preparation of our

secret Fire.

Three Heathenish Deities command this our secret Fire, *viz. Apollo*, *Diana* and *Pluto*. *Apollo* affords the warm Sun-shine. *Diana* gives the cooling and refreshing Night. And *Pluto* gives his Fiery Hellish Rain. That you may better understand it, *Apollo* gives Wine three times, *Diana* Milk twice, and *Pluto* his Hellish Fire once. Out of these three Gifts, our Fire is prepared. This is the true Preparation of our wonderful Fire. To speak of this more amply, is not convenient; we must not cast Pearls before Swine, which way this Fire is to be used to any Subject, is sufficiently discovered to a Man thereunto elected by God. But there are many, who having no dependency upon God's Blessing proceed after an evil and cheating manner, so that those *Alchymists*, or Gold-makers, are become a scorn to the Country, and no Man cares to dwell by them, lest their great and continual Fires should bring damage to his Neighbours, and this not without reason. For in making Oyl of *Vitriol* after the common way, a Fire is kept ordinarily for forty or fifty hours, which is a very tedious Work; but the Adepts can force over a Pound of Oyl of *Vitriol* in an hours time, with very few Coals, which thing I have already touched in my Writings, and shall say more of it in my Second Appendix. I have recommended this compendious way of making Oyl of *Vitriol* and *Sulphur*, to some Men; but they adhered so close to their old lingring way, that they were regardless of a better, notwithstanding that the Oyl of *Vitriol*, and the *Acidum* of *Sulphur*, are the Basis or Foundation of all the common *Hermetick* Medicine, for all other Mineral Spirits are by them acquired easily and plentifully. That Mineral *Acid* which is plentifully found in *Vitriol* and *Sulphur*, is the only Agent

whereby Nature *Maturates* the yet volatile and unripe Minerals in the Earth. And also all Tinctures, which are fixed and constant in the Fire, are by the hand of the *Artist* prepared by this, yet with the Addition of its Compeer, the external Fire. This universal *Acidum* is our Horse-dung, and the *Stygian* water, in which *Jason* drowned his Dragon and made him fixed: But when I here mention *Jason*'s Dragon, it comes into my mind what happened to me, when I once attempted to make such a Dragon, which vomited out Fire, and a black poysonous Smoke, out of *Sulphur* and *Saltpeter*: And because this History, may serve as a warning to many, who may incur much danger oftentimes by the common *Alchymy*, I will here insert it. A little before I became Bed-ridden, I had undertaken to steal from the ever watchful Dragon, that Golden *Fleece* which he hath in his keeping, and because this fierce Dragon will part with nothing before he be half slain, or at least, laid to sleep, therefore I was busied in this work, and had made a mixture of *Sulphur*, *Niter* and *Tartar*, and also another of *Salter-peter*, *Antimony* and *Tartar*, each apart in an Earthen Pot, in order to Fire them for Detonation. And although I had ordered, that one Pot should first be detonated, and then the other, that the Smoke might not be too great, yet this was not done, but they were fired both together, which caused such a great, black and stinking Smoke to ascend the Chimney, that when the Neighbours saw it, they thought the House had been on fire, and cryed out, Fire, knocked at my Door, to come in to quench it, when there was none, notwithstanding this was not done in my dwelling House, but in a House remote from all others, so that it could have done no hurt to any else, if it had been burnt down, but they not being satisfied got Ladders and looked

down the Chimney, and seeing no Fire there, they then said, it was Witchcraft. Out of this History, one may see what a dangerous Toyl the common *Alchymy* hath. This work to kill the Dragon, and to spoyl him of his Golden *Fleece*, is one of the pleasantest that ever I did in *Alchymy*, except the secret Fire. For when the *Sulphur*, *Salt-peter*, *Antimony* and *Tartar*, are denotated together, and sublimed with *Sal Armoniack*, the Golden *Fleece* riseth in a curious Golden Colour, and tingeth the Head, and Receiver with all sorts of Colours, like unto the Rain-bow, or a Peacocks Tail, and also one sees the Foot-steps of the scaly Dragon most gloriously in the Head; which *Neusementius* hath excellently described, in a few *French* Verses, and hath omitted almost nothing which belongs to this Work: And because I here write of this sort of Work, it will not be amiss, to add those Verses. Concerning this, *Medea* thus exhorts *Jason* in *Ovid*.

Pervigil ecce Draco, squamis crepitantibus horrens,
Sibilat & torto pectore verrit humum.

Which *Neusementius* hath thus rendred into *French*.

Voy le Dragon veillant de fureur forcenè
Qui d'escaille bruyante a le corps entournè
Dont le gosier sifflant fumeè & feu deserre
Et qui par replis tors va baliant la terre
De sa large poitrine en la poudre imprimant
Les sinueux sillons, qu'il trace incessament.

And may thus again be put into *Latine*.

Adspice squamosum tumidumq; furore Draconem
Semper in excubias aures frontemque minacem
Vibrantem, & nullo claudentem lumina somno
Qui crista linguisq, tribus præsignis, & uncis

Dentibus horrendis, patulo de gutture Flammas
Sibilat, & fumis atratis inficit auras,
Adspice multiplices Gyros quos ponderè Caudæ
Insinuat Terræ, cum longa volumina ducit
Perque superficiem reptat, cum pectore lato
Verrit humum, relegens eadem vestigia semper.

And in *English* may sound thus,

Behold this scaly Dragon swel'd with Ire,
His Crest doth brandish, with a dreadful Brow;
Nere closeth Eyes, nor Ears, nor yet retires
From dismal noise, and horid Teeth to shew:
From his broad Throat flames issue out
Black fumes infect the Air about.
Behold the Rings, which his encircled Tail
Casts on the Earth, whilst he doth form his Coil;
With his broad Breast he creeps upon its Face
Sweeping the ground, always in the same Trace.

Here in few words the Philosopher describes the whole Work, how to spoyl the Dragon of his Golden *Fleece*. But only to those, who easily understand these Verses, whose eyes God hath opened, and are already pretty well skilled in this Art. But to the unexpert all remains dark. Reading only will not do it, but you must put your hand to the Work, if you will attain to any thing. I have, for several years together, read, sought, and laboured in vain, before I found the right way of obtaining this Golden *Fleece*. And when at length I became Master of this Art, I could not but admire that it was so easie a thing, and yet so difficult to be learned out of Books. *Paracelsus* and *Neusementius* write the plainest of this, of which two expert Men, I first learned this Art, but afterwards I found a more Compendious way, so that I can now perform the whole Work, with the Charge of one Ducat [or ten Shillings] in a very short time. But I

must leave it to others to do, being yet detained in my Bed by my sickness: So that I can do no more, than to shew to others by my Writings and Instructions, the ready way to the Land of Promise.

Of the Second Fire, and its marvelous Fire-stone, which is generated by it.

We know, that Fire generates Stones, every one according to its Nature. The secret Fire of the Philosophers, engenders the Philosophers Stone, which is a universal Medicine for Men and Metals, as we have already heard. That the Meteorical fire, from whence proceeds Lightening and Thunder, generates also Stones, is known to all, for the Air procreates the same things, which are found upon the Earth. Therefore *Hermes* in his *Smaragdine* Table hath very well said, That whatsoever is beneath is also above, and what is above, is also beneath, by which, marvellous things are done. We know, that Frogs and Grashoppers and the like, which are procreated in the Air, have fallen down with the Rain. I have read in a certain Historian, that once a Calf fell down with the Rain.

Anaxagoras, a famous Philosopher, prognosticated in his Life-time, that after he was dead, a great Stone should fall down from the Air, to the Earth, which also came to pass. We also know, that sometimes great pieces of Iron have fallen down, not compact, but sticking one part to another like drops. And also, every Body knows, that Stones are cast down by Thunder and Lightening, which Stones are formed and concentrated by the Lightening, and so have assumed the Nature of a Stone; for in the Lightening is hid a very miraculous Property seeing that Lightening is a Fire of quite another Nature, than our

common Fire, which breaks in pieces all hard things which resist, but toucheth not what maketh no resistance. It hath very often happened, that the Lightening hath broken a Mans Bones, without hurting his flesh. We have also known, that it hath melted the Sword in the Scabbard, and left the Scabbard whole. This Stone generated by Lightening, hath quite another Nature than common Stones, for it is not transparent like a Pebble or Sand-stone, which melt in the fire. Neither hath it the Nature of transparent and hard Gems, which do not melt in the fire, and yet keep their Lustre, neither can the fire reduce it into Lime, as it doth a Chalk-stone. In a word, it can be compared with no Stone in the World. Its shape is also wonderful, for it is generally sharp at both ends, but yet they are not all of one Figure or shape, they are generally smooth on the outside, and of a milky Colour, and reddish within. I have one which is Triangular like a Star, and if you turn it, 'tis like a Heart, of which I never saw the like. I have also one which is Cole-black, which is rough both within and without, it is a wonder to me, that this Stone will not strike fire with Steel, notwithstanding it is generated by fire. We may also by Art make Lightening out of Iron or Steel, in which also is generated a strange Stone. The Thunderbolts love all things which are combustible, especially Gun-powder, for the Lightening it self proceeds from *Saltpeter* and *Sulphur*, and that is the reason, why it so often strikes into Towers, where Gun-powder is kept, and also it useth to strike Old Oak Trees, which contain *Sulphur* and *Saltpeter*, also upon Church Steeples, but seldomer in the open Fields. I once saw in *Germany*, where the Thunder had stroke a Tower of Gun-powder, and although it was four square, yet it run so about it, and took out a piece of Stone-work

all round, as if it had been cut out with Tools, because it could no where find entrance. Strange things are done by Lightning, it sometimes killing the Horse, and not hurting his Rider, and again killing the Rider, and not hurting the Horse, because it is no common Fire, but a concentrated Meteorical fire: It hath no resemblance of the fire of the Sun, much less of our common Fire, but our secret Fire of the *Chaldeans* hath some Agreement with it, because it is made of Iron or Steel, and *Saltpeter*: Therefore it cannot be much unlike the fire of Lightening, for that is also generated out of *Saltpeter* concentrated, and *Sulphur*. Steel is concentrated *Sulphur*, that hath also Power to concentrate *Saltpeter*, and so to generate this marvellous Fire. The Meteorical Thunder-fire is a terrible one, but our Steel-fire *is* more wonderful in its Essence and Operation, as we shall heer by and by, for incredible things are wrought by it, so that even the Stone of Philosophers, never so well prepared, is not to be compared with it. *Query*, whether this Thunderbolt which is cast down by the Lightening be of any Virtue, or whether it be a dead and unprofitable Stone? I answer: It hath been always reputed, that if a Thunderbolt be kept in any house or place, the Thunder and Lightening will never strike into it. Whether this be true, I cannot tell, yet this I know, that those who keep them esteem them highly, I my self have one, which I much esteem for its marvellous Figure, for turn it which way you will, it always represents a Star or a Heart. Many strange things are performed by this Thunderbolt. I have seen several Foresters break it into pieces of the bigness of a Pea, which they put into a Bullet-mold, fill'd up the Mold with melted Lead, and did believe, that they could not miss any wild Beast at which they should shoot it. I have also

seen some Souldiers make such Bullets, and formerly believed, that they could pierce any thing with them, that otherwise they could not shoot through. I have also seen others, who have put pieces of this Stone into the pummels of their Swords, and believed, that this took away their Adversaries Courage when they should encounter them, and so they might easily Conquer them. These and the like things, I have seen done with it. But whether this be so or no, it is probable that there should be some ocult Virtues in those Stones. For seeing that all Stones are good for somewhat, why should this marvellous Thunderbolt only be good for nothing? Some cause Women in Labour to hold these Stones in their hands, to facilitate their Labour; they also say, that it encreaseth Womens milk, if it be put into their drink. Others put them into the hand to stop Blood. If one could do any good with it, one might easily, by the help of a certain Magnet, attract a great many of them from the Air, as you shall hear anon. Now again, to return so our Fire and Fire-stone, I affirm for truth, that our secret Fire and Fire-stone, in its Essence and Efficacy, is more wonderful than the Meteorick Lightning and Thunderbolt. For our Fire doth not burn or flame, but when we will have it, otherwise it is like a dead Black-stone, if you only keep the Air from it, it will remain a Stone as long as you please. If you put it into a Glass and stop it very close, and keep it under water never so many years, it will still remain Fire, and not be hurt. For our *Chaldaick* Fire, when once prepared, will not burn, but remain good for ever, if you keep it from Air and Water. It is sufficiently known, that the ancient Heathens put burning Lamps into their Vaults, of which Lamps I have seen many, that were digged out of Mines in *Colen*. Some of these Lamps were found

in some burying Vaults burning, when they were first opened, but as soon as the Air touched them went out. But our *Chaldaick* Fire remains dead, when kept close, and is kindled by the Air. I call it dead, but it is rather a dormant Fire. This our secret Fire hath so strange a Property, that it is able at all times to attract Fire out of the Air, not only in the hot Summer, but also in the cold Winter Nights, when the Sun is farthest off. By the help of this Fire, I believe, I could at certain times light a Candle, either under or above the Earth. The *Maccabees* set their Sacrifice on Fire by this, and not with common Wood, or Coal, fire, as the Vestal Virgins in *Rome* were forced to feed it with Wood continually that it might not go out; if by chance or neglect it went out, those Virgins were buried alive; in so great esteem, had the *Jews* and the Heathens, their Fires.

Now as for the use of our secret Fire, no Man may be so bold as to discover the Power thereof to the World, for things incredible are to be done by it, which are better to be concealed, than made publick: Yet I will a little touch at it. The secret Fire of it self is of no use in Physick, but great Secrets may be prepared by it, both in Medicine and *Alchimy*. First, out of our fiery Mass may be driven a living *Mercury* of *Mars*, which is the most noble Subject to prepare an extensive Tincture, both for Men and Metals, for of all *Mercuries* of Metals, this is the best. When our Fire is melted into a thick water, and this fiery water poured upon a subtil Calx of Gold, and digested with it, it will attract the yellow Colour from the Gold, and leave it white, yet the Tincture is not yellow, but as green as Grass, out of which an excellent Medicine may be made; it is also profitable in *Alchimy*. For it is also of this Nature, that if you put a Solution of Gold and Silver into it, they will be joyned together

without Precipitation, which is not usual to be done. One may also squirt this fiery water, by peculiar Springs, to a great distance, and thereby fire any Combustible matter. If you will, you may also shoot this our Fire in a dry form, out of great and small Guns, to fire any thing with it. I believe, that by the help of this, one might fire a great Canon under water, by which you may fright Fish up to the Surface of the water in deep Ponds, so that you may catch them with small Nets. One may also drive away all hurtful wild Beasts, as Bears, Wolves, Foxes, nay even Lyons, Tygers and Dragons, out of the Wilderness. One may also drive away High-way-Men, Murtherers out of their Ambuscades, and catch them. In a word, many strange things may be done with it, which for certain Reasons I dare not mention. The greatest and the best thing that may be done by this secret Fire, is the preparing of the *Mercury* of *Mars*, as also after a Magnetical manner to draw the Lightning which way one please. I have had this Fire now for above twenty years, and durst not own that I had Such a thing, now I am near my end, I was willing to let it be known, that there is such a Fire in Nature. If I did not fear, that malicious Men would abuse this secret Wonder-fire, I would have been plainer, but the time is not yet come for the doing those great things, but when *Elias* the *Artist* shall come, he will not fear to make great Alterations in the World, by the help of this Fire. He will establish much good, and abolish all that is evil, but I have said enough of this at this time. I have indeed told you here that it will be done, I do not desire, neither shall I live till it shall come to pass, for such great Changes will not be made with ease, but with great Zeal. God preserve the Pious, and shew them a way over the Mountains, where they may live secure from

this *Sodomitish* Fire, *Amen*.

Of the Third secret Fire, and the wonderful Stone that is engendered by it.

That pious Philosopher *Basil Valentine*, in his Triumphant Chariot of *Antimony*, teacheth, how to prepare a stone by Distillation and Rectification out of the purest part of *Antimony*, and calls it the *Stone of Fire* because this Stone is prepared by Fire out of fiery Subjects: And also because it expelleth all Diseases from the Body of Man, and consumeth them as common Fire doth Wood. He also saith, that this Fire-stone can transmute Silver into Gold, although in a small quantity. The highly experienced Philosopher *Helmont*, makes mention of almost such a Stone, which he saith, he saw in *England* with one *Butler*, and tells of wonderful things that the said *Butler* did with it. Now by reason of my diligent search into Nature and the Blessing of God, such a Stone hath fallen into my hands, with which I can do the same things in Physick and Alchimy, which *Basil Valentine* ascribes to his Fire-stone, and *Helmont* to *Butlers* Stone: I could not but leave to posterity, that it is possible to prepare this Stone out of *Antimony*. The Art consists in this, that you first bring the *Antimony* by Sublimation, Distillation and Rectification to the greatest Subtilty, and afterwards again concentrate this subtil Spirit into a hard Stone, which Stone when it is not fixed (being then useful in Medicine) is of a reddish Colour, and easily melted, and penetrates all Bodies. But if by it you would graduate Silver into Gold, you must first fix it, to abide the *Cupel*, but being once fixed, it will not then perform in Medicine what it would before. It is worth much more, when unfixed to be used in Physick, than when it is fixed for the tinging of

Silver. For the health of Men is more precious than Gold or Silver. And with an universal Medicine, that will Cure all internal and external Diseases, you may get Gold and Silver enough. I have at this present time, but a very little of this Stone left, but am resolved in a little time to make a good quantity of it, that I may therewith serve my sick Neighbours. For it works strange things as you shall hereafter hear. This our Stone is so powerful in its working, that we dare not give it in substance, for one Grain of it serves for twenty Doses or more, and each of them hath power to expel from the Body whatsoever is hurtful. This Medicine opens all Obstructions, and you shall hardly find any other comparable to it. The best way to use it is to keep it whole, and not to powder it, and then it is fit to be used both inwardly and outwardly. If you will use it inwardly, then put a few bits of it into a Glass, and pour Spirit of Wine upon it, in which a little Sugar is dissolved, and so let it stand till you have occasion for it. If you will purge any Body with it, you must put a few drops of it into a spoonful of Wine or Beer, or any other Liquor, and give it to the Patient, and order him to be kept warm, then the Medicine will work in his Body, like fire upon Wood, and consume whatever impeded his health, and drive it out by all the Emunctories, *viz.* by Vomit, Stool, Sweat, Urine and Spitting, and leaves no impurity in the Body, and so it expels all Fevers and Agues, however distinguished. It also cures the Plague, *Leprosie*, Gout, the falling Sickness in young and old. It takes away all obstructions of the Body, *viz.* of the Liver, Spleen, and Lungs, it expels all ill Humours, contained in the Cavity of the *Thorax* and all other parts of the Body. This our Stone also opens the Obstructions of the Mesentery, carries off all Slime, and Salt watry

Humidities. It cleanseth the Stomach and Guts from all pituitous and bilious Slime. It also draws all hurtful Humours out of the Brain, takes away noise in the Ears, Comforts the hearing and sight, takes away every Toothach in a moment, fastens loose Teeth, and hinders their fouling. It takes away all the Vices of the Throat, Mouth and Tongue, and suffers no uncleanness or foulness to abide thee. It is a pitty to see that no Physician hath a Remedy for the Toothach, but either pulling them out, or stopping them when hollow with *Narcoticks* or hot Oyls, which are indeed no cure: Now forasmuch as this Disease troubled People of all Ages, and few know any Remedy for it, I think it necessary to set down a never failing Cure. 'Tis true, most Toothachs may be put off by Purging, and need not so painful a Cure, as drawing. Out of Pity to those, who are troubled with the Toothach from their infancy, I here declare the Remedy. ℞. Of our Fire-stone, as much as a Pea, and put it into your Mouth, with half a Spoonful of Wine, keep it in your Mouth as long as you can, or so long till the Stone hath drawn your Mouth full of Rheume, then spit it out, and again put the Stone into your Mouth, with as much Wine as before, and keep it there till your Mouth is again fill'd with Rhume, then again spit it out, and continue doing this so long, till you have spit out half a Pint of Rhuemy Spittle, not reckoning the Wine. The next day again draw out the same quantity; do this every Morning fasting so long, till no slimy matter, but only a clear insipid water comes out, which is a certain sign that your Head and Brain is freed from all superfluous Moisture. When this is done, for a great while you will be free from all noxious Rhumes, or Salt defluxions, which fall from the Head to the Teeth, and there cause pain. This our Fire-stone doth not only draw all

noxious Humours from the Head, but also out of the Stomack, Lungs, Liver and Spleen, and carries them out of the Body, by the Mouth, as well or better than any common Purge. But if the Body should be too full of ill Humours, so that our Fire-stone, should not be able to draw them all out that way, then you must take some of it inwardly extracted as before mentioned. But because this our Stone is yet unfixed, and therefore sometime causeth Vomits, and some are not able to bear Vomiting, therefore you may prevent it, by putting distilled Vinegar with Sugar upon the Stone, instead of Brandy, and so extract it, and this Extract will cause no Vomits, but only work by Stool: This is enough to be said for the Cure of the Toothach. But if Parents were sufficiently knowing, and careful of their Children, they might in their Childhood prevent the greatest part of this Mischief, by causing them daily to wash their Mouths, and behind their Ears, with cold water. But in those who are come to Maturity, our Fire-stone is the best of Remedies and never fails. It also cures the Scurvy in the Mouth, when little hot Pimples appear, and the decay or washing of the Gums. This Stone being held in the Mouth with Wine, also preserves Old Men from Apoplexies, Catarrhs, and the like. Let this suffice to be spoken concerning the Virtues of our Fire-stone, in the curing of internal Diseases. But because the Variety of Distempers is great, I will there set down the true way of using it, that none may err in its Application.

Of the true use of this Medicine in Diseases.

In all Fevers or Agues, let them be Quotidians, Tertans or Quartians, you must always give our Medicine two hours before the fit, and keep the Patient from the cold Air. In the Plague, Pleurisie

and other hot Fevers, you must not delay the using of this Medicine, but as soon the Patient is taken, give him a Dose of our Medicine, let it work with him in a warm Room. And if the Disease abate not, give him the next day another Dose more or less, according to the condition of the Disease and the Patient. And you must beware of Bleeding, if the Patient be strong enough to endure a Purge, but if the Patient should not have sufficient strength, and yet the heat encrease, then you may abate the heat by taking away a little Blood, but not too much, that the strength may not be exhausted with the Blood, and the evil yet remain in his Body, for by Purging, only that which is hurtful is expelled, and the good remains.

In the Epilepsie, you must use this Medicine only every other, or every Third day, as long as there shall be occasion.

In the Stone of the Kidneys and Bladder, once in a Fortnight.

In the Dropsie, once a Week.

In the Cholick, once after you have used a Clyster.

In the Leprosie, once a Week.

In the Gout of all sorts, once in three or four Days, until the pain is gone.

In Obstructions of the Lungs, Liver, Spleen and Mesentery, once or twice one after another.

In the Venereal Disease, you must use it every Third day, and Sweat between whiles, till the Disease is gone.

In the *Hypocondriack* Melancholy, Scurvy and the like Distempers, which proceed from Salt and

Cholerick Blood, you must take a Dose every Third day, till the Disease is gone.

In all sorts of Scabs and impurity of the Skin, which proceed from watery Blood, you must take it once or twice, and apply outwardly a fixed white *Sulphur*.

In the Dysentery or Bloody Flux, use it but once and it stays the Flux.

Of the outward Use of our Fire-Stone.

If our Antimonial Fire-stone be boyled for some hours in Sallad-oyl, it draws out of it many Virtues, so that being only outwardly applyed, it doth much good in Physick. The Oyl becomes red in the boyling, and if it doth not so, it is a sign, that it hath not been well boyled, but if it be well done, it will do what I here say. First, this Oyl is good to heal all fresh Wounds, and old Sores, if you dip Pledgets in it, and lay them thereon, and so keep it from the Air with a Plaister of Wax. It also cures all Bruises, being anointed with it, or a Cloth dipt in it, and laid over the Bruise. A little Cotton being dipt in it, and applyed to the Navel with a Nutshel, purgeth those, who are easily moved, as well, as if they had taken it inwardly: And if being so applyed, it should not work with Men, that are not easily moved, you may inject a Dram of it Clysterwise by a Syringe, and then it will open the Body, and carry all slime and filth from the Guts, and is certainly the best Remedy in the World against the Cholick. For it doth not only draw what is bad out of the thick Guts, as Clysters do, but also out of the small Guts, yea even out of the Stomach, to the ease and admiration of the Patient. This Oyl also applied to the Navel and Clysterwise, immediately helps Women, who are troubled with

the *Suffocation* of the Matrix, for which Disease the World cannot afford a better Remedy. And without doubt this Oyl hath many more Virtues than I yet know, but time will discover them; for I have not had it long, but am resolved to have a good quantity of it made to serve the Sick: And no doubt, but in a short time this high Medicine of the Stone and Oyl, will be known to all *Europe*. For it will far outdoe the whole *Galenick Apparatus* of Medicine. Certainly those Physicians, who serve in Armies, should not be without this incomparable Medicine, which is of so small Carriage, and doth so great things. For one Ounce of this will make at the least a Thousand Doses, and so by consequence many may be cured by it. If every *Chyrurgian* in an Army, should have but half an Ounce of this Stone, for inward use, and some Ounces of the Red Balsome, for outward use, the Lives of many Souldiers would be saved, which for want of it must dye. The threatning of Armies is already over our Heads. God send us what is good for our Souls, and preserve the Pious from evil. And so we end this Book of the *Firestones*. If it please God, the Seventh part of the Prosperity of *Germany* shall shortly follow.

De Purgatorio Philosophorum:

OR,

A TREATISE concerning the Purifying Fire of the Wise Men.

With which, the Philosophers cleanse their Mineral*,* Animal*, and* Vegetable *Subjects, and exalt them to the highest degree of Purity, in order to prepare* Universal Medicaments *from them, for the Bodies of Men and Metals.*

Which Purgatory Fire is Called Ysopaica*, by the ancient Philosophers, that is, to say, the Art of washing with Fire.*

Together, with a subjoyned instruction, how, by means of the Salt of the World, out of all Metals and Minerals, a living Mercury *may in quantity be prepared.*

From the High-Dutch *faithfully Translated into* English.

Reader,

If any wonder at the Title of this little Book, let them know, it agrees very well with the Matter it treats of, forasmuch as all things that are cleansed with Fire, may truly be said to be purified by means of a Purgatory. There are indeed besides this, many other ways of cleansing as by Water, Lye, Soap, and other moist things; but that way cannot properly be called a Purgatory, nor any other, but what is done by Fire. I intend in this Book to treat of three sorts of Purgatories, *viz.* First, of the secret flaming Purgatory, or cleansing Fire of the Philosophers, made of *Alcolized* Spirit of Wine, wherewith they purifie the Souls of Vegetables, Animals and Minerals, dignifying them thereby to enter their Heaven.

The other Purgatory God makes use of, to purifie his dear Children here in this Vale of Misery, to make them abhor sin, and fit them, after many afflictions, and torments endured, for a Translation with all Saints, into his heavenly Kingdom, there to behold his Face to all Eternity.

The Third Purgatory is, that of which the *Christians* of old have Writ, and is to this day still believed by the Church of *Rome*, *viz.* that the Souls of the deceased, when by the guilt of deadly sins, they are not immediately sunk down into the eternal Hellish Pains, are in this Purgatory cleansed of the pardonable sins they have committed in this Life, and are made worthy to enter into eternal Joy and Salvation.

Now what this Purgatory is, which no Person living is able to give an experimental and true grounded Account of, we will, if it please God, a little enquire into, after that we have first exposed to

view, and unanswerably asserted the truth of the two foregoing Purgatories, which our eyes have seen, and our hands have handled.

Concerning the First Purgatory.

The First Purgatory, or cleansing Fire of the Philosophers, with which they prepare their Universal and particular Medicines for Cure of all Subjects of the three Kingdoms of the World, hath been most carefully concealed by them. I have indeed formerly, of Friendship and Goodwill, revealed this Fire, with its most profitable Use, to some Persons, by which means others unworthy have began to perceive something of it, and used their utmost endeavours to attain the full knowledge of this high Secret, and have so far succeeded, as to understand it in part, *viz.* the Use of common Spirit of Wine, which is a considerable ingredient of the said Philosophick Purgatory Fire.

But after all their serching, they never attained the knowledge of the *Salt* of Art, by which the Spirit of Wine is *Alcolized*, which is the best and chief ingredient of this Fire. Forasmuch then, as the Spirit of Wine is thus known, and will probably yet further be divulged; I have thought good to publish it my self, and to communicate the Secret to all. But as for the secret *Salt* of Art, whereby the Spirit of Wine is actuated and fortified, and is the proper Agent for Meliorating of Vegetables, Animals and Minerals, and whereby they are brought to the highest degree of Purity, none hitherto have been able to entice it from me, and I trust that for time to come I shall be more cautious of communicating ought to false and wicked Men.

Let no Man therefore imagine Spirit of Wine to be

the secret Fire of *Artephius*, whereby some Minerals and Metals, without any foregoing separation of the pure from the impure, may without any diminution of their weight be changed into a mere pure Tincture. No in no wise, for no Spirit of Wine hath any such power. But as for what simple Spirit of Wine is able to perform, that we will here declare, and no more at this time. I doubt not but many will persuade themselves, that in having the Spirit of Wine, they are Masters of the whole Secret; but that's a great mistake, he that questions it, let him read *Artephius*, *Pontanus*, and some few others who write of it, and he will find that a simple Spirit of Wine hath no resemblance with the Fire of *Artephius*.

For the Philosophers who write of it tell us, that their Fire *acts as a proper Agent on its Patient, with an invisible Flame, continually, equally in one and the same degree, and at last changes it into pure Tincture*. Which things cannot be said of Spirit of Wine, which doth not burn continually, equally, or invisibly, from whence it is apparent, that Spirit of Wine is not the Fire of *Artephius*, nor can be compared with it.

Now what this Fire of *Artephius* is, has been sufficiently declared by me, in my Treatise *of the Threefold Fire*, and therefore unnecessary to write more of it here. It remains only for me to declare, how Vegetables, Animals, and Minerals with the help of any burning Spirit, not only that of Wine, but of Corn, Honey, Fruits, Leaves or Grass may be most highly purified, and reduc'd to the Highest Medicines.

In my little Treatise of *Elias the Artist*, I have taught at large how to bring the Essences of Metals, Stones, Vegetables and Animals over the Helm, by means of an Alcolised Spirit of Wine, and to prepare universal

Medicaments from them, to which therefore I refer the Lover of Art.

And will now proceed to declare, to how good purpose Spirit of Wine may be made use of in Physick. We all know that in general there are but two ways of cleansing impure things, *viz. Water and Fire*. Now Water can only take away those defilements that are outward and superficial, not being able to pierce to the Center; whereas Fire does not only purge the outside, but even that which is inmost, separating the impure for the pure, as hath already been mention'd.

We know also, that the Flame of Fire can consume nothing but its like, *viz.* the Combustible *Sulphur*, but cannot consume the incombustible *Mercury*, nor destroy, burn, or annihilate it, the Flames serving only to meliorate and exalt it. For the *Mercury* of all things can no way better be purged than by Fire, by which though it be driven away, yet may always be found again, as being incombustible.

For *Mercury* is the best and purest of the three Principles, forasmuch as it cannot be hurt by any Elements, not by the most violent Fire, much less destroyed, because it is throughout Homogeneal.

There are three things in the World which be incorruptible, the first of which is the *Mercury* of Vegetables, Animals and Minerals, which, when by its Enemy the Fire, it is tormented, and driven from its Body, loseth none of its Virtues, but is only purified thereby. This incombustible Soul of Vegetables, Animals and Minerals, is one of those three things in the World, which are fixed, constant, and unperishable in all trials and conflicts whatsoever.

The second thing which is constant, permanent, incorruptible and invincible is Truth, which cannot be suppress'd by any Lies or opposition whatsoever; Oppressed she may be, but not totally suppressed; for God himself is the Truth, and as God cannot be overcome, so neither can Truth.

The third and last incorruptible subject in the World, is the Immortal Soul of Man; for whatsoever Afflictions or Persecutions a good Man suffers from wicked Men, can not in the least hurt his Soul, but serve only to purifie, exalt, and enoble it. The more Gold suffers in the Fire, the better and purer it becomes, and as true it is, that the Soul by the adversities of time, becomes refined and graduated to the height of Purity, being by this Earthly Purgatory dignified and prepared for Eternal Glory.

But to return to our purpose, which is to shew that the cleansing of Vegetables, Animals and Minerals, must be performed by their own Purgatory, *viz.* a common burning Spirit. We will begin with Wine, as being a very noble Creature, and see what good thing may be had from it, by means of its own Purgatory or Cleansing Fire, which without it could never have been brought to Light.

Now to speak fundamentally of this matter, we must first of all know, that several different Spirits lie hid in Wine, which also may separately be distill'd from it. As in the first place the known burning Spirit; next that Spirit which is distill'd from Crude *Tartar*, which is of a quite different nature from that which is distill'd from Wine, or its Lees, which being kindled burns away in Flame, consuming all the *Sulphur*, leaving nothing but the incombustible *Mercury* or Essential *Salt* behind, and that in a very small quantity, but of great Virtue;

whereas the Spirit of *Tartar* which is distill'd by *Retort*, though it be much more subtil and penetrative than the burning Spirit, yet will not suffer it self to be kindled or burnt away, being otherwise of great use in all Tartareous Diseases, and obstructions of the Body.

There is also an Antinephritical Spirit distill'd from the fixed *Salt* of *Tartar* with distill'd Vinegar, which afterwards suffers it self to be sublimed, and being distilled yield a very strong Spirit, of which time doth not permit to treat at present. We will only, point out to you, by what means the most glorious *Mercury* and Essential *Salt* of Wine, may most easily be obtained, and what great things may be perform'd by it in Physick.

℞. Of white *Tartar* well pulverised 1 *l*. *Spirit* of *Salt* 1 *l*. and half, mix these well together, and fill therewith the fourth part of a Glass Body, and pour on 3 *l*. of Spirit of Wine, lute the head on immediately, for when these two Antagonists, the Acid Crude *Tartar*, and Urinous *Salt* of *Tartar* meet, they furiously attack each other, and in their Conflict send forth a very subtil Spirit, and a glorious Essential *Salt*, which *Mercury* the Spirit of Wine when distilled carries over with it. When now this Spirit of Wine being kindled burns away, the *Mercury* or most pure Essential *Salt* is thereby loosened, and with the Flame goes over into the Receiver, where it is caught of the Phlegm, from which being separated by distillation in a Vaporous Bath 'tis fit for use. This Cælestial *Salt* of Wine is of wonderful Virtue, concerning which I have given a full account in some of my last published Writings.

Its Virtues are chiefly these; It has the

Præeminence of all Medicaments whatsoever, in curing the Stone, Gout, and the like Tartarous Diseases. Moreover this Heavenly *Salt* penetrates the whole Body, opens all Obstructions, strengthens the Heart, Brain, and all Vital Parts; is a powerful Diaphoretick and Diuretick. Indeed any one may easily imagine, that a Quintessence of Wine, when purified by its own Purgatory, must needs exert wonderful effects, and be of great uses, in the hands of a skilful Physician; of which more hereafter.

Furthermore from Wine, by means of its own burning Spirit, may be separated an excellent Volatile *Salt*, after this manner. Dissolve the Oyl of Wine, which by distillation is got out of the Lees in a strong Spirit of Wine, so as the Oyl may be well united with the Spirit. This done, kindle the Spirit of Wine, and let it burn away under our great cooling Helm or Head, by which means the *Mercury* or *Salt* of Wine goes over with the Phlegm, and is caught by it.

In like manner out of that stinking Oil which is driven from *Tartar* by a *Retort*, and is of great virtue, (though for its loathsom scent it cannot be used) a very powerful Volatile *Salt* may be obtained, by burning away the said Oyl with a burning Spirit, which Volatile *Salt* by those Purging Flames loseth its loathsom smell, and may be made use of in Physick, as that before mentioned prepared from Wine.

According to this method of obtaining the *Mercury* of Wine, we may proceed with all other Vegetables, and separate their pure incombustible *Mercury*, by burning away their Oyls, with their own or any ether burning Spirit, by which means the Volatile *Mercury* is caught.

It is to be observ'd, that all Oyls distill'd from Herbs, whose flowers resemble Stars, do yield more

Volatile *Salt*, than the distill'd Oyl of other Herbs. When these Herbs cannot be had fresh and green, we may take their Seeds, which yield more Oyl and Volatile *Salt* than the Herbs themselves. In like manner all Oyls, distill'd from Seeds, afford more Volatile *Salt* than those which are forc'd from Roots, Stalks, Leaves or Wood; the Seed always abounding with more Volatile *Salt* than any other part of the Vegetable; and that because God hath placed the growing and multiplying virtue of all things in their Seeds, from whence also the same is most easily separable for the use and service of Man. In particular, the Seeds of Annis, Fennel, Dill, Carway, Cumin, Cresses, Scurvy grass and Mustard afford much Volatile *Salt*.

So likewise all Excremental and Superfluous Egestions of Nature, such as are the Hair of Men and Beasts, the Horns and Claws of Beasts, the Excrements of Beasts and Birds, as also their Feathers, do abound with Volatile *Salt*. Amongst these we may also reckon Amber, Soot, and Smith's Coals; when the stinking Oyl of any of these is burnt away, the remaining Essential *Salt* will procure the Physicians praise and honour, and the Patient's help and ease.

The Seeds of Henbane and Tobacco do yield a very powerful *Salt*; so likewise do the distill'd Oyls of Spices, as well as those made by Expression afford a most excellent Volatile *Salt* being burnt away, by means of a burning Spirit, united with them. Yet would not I counsel any to burn away such precious Oyls, forasmuch as we have other Subjects, which cost us nothing, and yet yield a better *Salt* than any Spices whatsoever; for Minerals and Metals, when without a Corrosive they are brought into a strong

Spirit of Wine, yield a much better *Mercury*, wherein all the virtues of Vegetables are concentred; and consequently are far more efficacious than any Vegetable *Salt* against all Diseases whether of Men or Metals.

In this way we may easily, and in a manner without labour or any considerable charges, procure a running *Mercury* from all Minerals and Metals; which *Mercury* of Metals suffers it self afterwards to be fixed into a true Tincture for Men and Metals, by means of its proper Agent and Secret ever-burning Fire, and this easily without any loss of weight, which cannot be expected from a common *Mercury*, and therefore we must be provided of a Metallick *Mercury* if we would do this feat. *Mars*, *Venus*, and *Mercury* are the best amongst the meaner Metals for this purpose, as yielding the best *Mercury*, but the *Mercuries* of *Sol* and *Luna* are the best of all. And it is a thing that deserves our wonder, that from such Compact Bodies, as those Homogeneal Metals are, which are accounted indivisible, a Volatile *Mercury* should be separated. Indeed had I not done it my self, I should hardly have been persuaded of its possibility. Resuscitative *Salts* are the only means to effect this Wonder, and whosoever knows in due manner to apply them to Metals, to him it is an easie thing, yea, Childrens play, in one days time, without toil or labour, to separate a running *Mercury* from all Metals and Minerals. There is one only *Salt* in the World, which has a power above others to revivifie Metals, costs nothing, and is every where to be had in abundance: This contemptible *Salt* the Philosophers have always concealed, saying, that *it is cast out upon Dunghils, and as much beloved of the Wise, as it is hated and despised by Fools*.

In this *Salt* greater secrets lie hid, than in the *Salt* of Art before mentioned, which cannot be had without toil and labour; but this our more secret Resuscitative *Salt* of Art doth far excell that, for it not only exalts and multiplies the colours of *Sol* and *Luna* as well as that, but also radically opens all Metalline Subjects whatsoever, separating their purest *Mercury* from the gross *fæces*, and brings it over with it self, which no other *Salt* in the World can do. There are indeed some other *Salts* to be found, which in some degree do resuscitate Metals, and separate a running *Mercury*, as *Salt* of *Tartar*, *Urine*, and the like, but are not comparable with our resuscitative *Salt* of Art, which, for all them, continues the undoubted Monarch over all *Salts*. There are very few to be found, who are able with so much ease and little charge to separate a running *Mercury* in quantity from Metals, and fix the same into a true Tincture. Wherefore we should make it our business to enquire into the nature of *Salts*, and learn to know their several uses; because in *Salts* great good lies hid, which few believe or apprehend. *Plato* indeed was of opinion, that something Divine was contain'd in our common *Salt*; and other Philosophers have not stuck to say, that *in the Sun and Salt is All.* He that doth not know what Fire and *Salt* are, knows nothing, and deserves not the name of a Philosopher.

And thus much shall suffice concerning Fire and *Salt*, and the great things that may be performed by them. He therefore who desires to approve himself a good Physician or Chymist, let him study the nature of Fire and *Salt*, and learn to distinguish them, for without this he'l never do any thing to purpose in either faculty.

To return now to our Spagirical Purgatory, and shew that the Philosophers by means thereof performed their greatest Arcana. *Paracelsus* alone, the Monarch of Physicians, gives us a sufficient Testimony hereof, when, treating of the Element of Fire, in his Book of *Sulphur*, he saith, That if a Physician have not amongst his Secrets the Element of Fire from *Sulphur*, he is not a Physician, but a ———— O my dear *Paracelsus*, thou art not to be blamed for thy zealous inveighing against those Lazy Lubbards, and if thy words be Authentick, 'tis to be feared that scarce one good Physician will be found in all *Germany*, forasmuch as the Element of Fire of *Sulphur* is utterly unknown. But this cannot be said, for that besides this Element of Fire, there be several other good Medicaments a Physician may prepare. Yet forasmuch as I have writ somewhat of it here, I hope it may stir up some to search after it, and so learn to prepare their Medicines by Fire; because whatsoever can without hurt or loss abide the Fire, the same must needs be very pure and good.

David to this purpose gives us a similitude of *Luna*, which must sometimes pass the Fire, before it attain its utmost purity. This art of cleansing things with Fire, was by the Philosophers of old termed *Ysopaica*, of which see *Paracelsus*.

It is to admired, that how black or smutty soever any thing be, after it is wash'd by Fire, it becomes snow white; which the *Mercury* driven by Fire from black *Sulphur* and *Mars*, is alone a sufficient proof of, in which whiteness the fairest Red lies hid. That *Ysopaica*, or the Art of Washing with Fire, and thereby changing Black to White, was in use amongst the Ancients, seems probable from *David*'s words, when he cries to God; *Purge me with Hysop, and I shall*

be clean, wash me, and I shall be whiter then snow: *David* here desires nothing else, than to have his Soul, which was cole black by Sin, washed and purged by the Fire of the Holy Ghost, and therefore by way of Comparison he mentions *Ysopaica*, or the Art of Washing black things white by Fire. In a word, this Art of Washing things snow-white by a Philosophical Purgatory Flame, appears to be the head skill of Philosophy, Physick and Alchimy.

And forasmuch as I have here made mention of *Ysopaica*, I hope I shall not be thought tedious, if I set down some more instances of cleansing black and impure things by Fire. For seeing this excellent and incomparable Art has for some hundred years been in a manner wholly lost, *Paracelsus* being the first that hath renewed the knowledge of it, I have thought good at present to restore this Royal Art to its former lustre and glory, wherewith it shone forth in the Schools of the Kings of *Egypt*, where those of the Blood Royal were taught and instructed in the same. In which Schools *Moses* also (as being the Adopted Son of *Pharaoh*'s Daughter) had his Education, being there instructed in all the Wisdom and Skill of the *Egyptians*.

In those times this *Ysopaica*, or Art of Washing with Fire was in great esteem and flourished, which was the cause of the great Riches and Puissance of the *Egyptians*, which continued till the Monarchy was made subject to the *Romans*; and yet even then, being Possessors of *Ysopaica* and *Chrysopeia*, they soon put themselves into a condition again of disputing their Liberty with the *Romans*, and rebelled against them; and though by the prevailing Power of the *Romans* they were still overcome, yet did they often reiterate their Revolt; until at last the Emperor

Diocletian being informed that their Art of Chymistry was their inexhaustible Treasure, which still encouraged them to rebell, sent a great Army amongst them, with Orders to Ransack all Places for Books treating of that Art, and commit them to the Flames; which done, they quietly afterwards endured the *Roman* Yoak, which before, on every occasion, they were ready to shake off. By the same means also the said Art has been as it were totally lost, which I am not without hopes to restore again, and if Death should chance to prevent me, yet will it assuredly be done after my Death by *Elias* the *Artist*. I have indeed already in some of my last Treatises so plainly writ of this Art, that any one, who is any thing skilful in the Fire, may become Master of the Art.

To return then to *Ysopaica*, I say, I have already communicated the use of a Burning Spirit, by means whereof all stinking, impure, Vegetable, Animal, and easily inflamable Mineral Subjects, may be washed to the highest degree of Purity, with which great things may be performed, especially in Physick, and such as are impossible to be done by any known way. Indeed by this alone most profitable discovery, I have discovered a new World of Art, which for so many hundred years has been unknown; and I doubt not, but this way of washing with Fire will serve for a shining Light to lead Physicians to the true Spagyrical Physick.

Thus much shall suffice to have spoken concerning the moist fiery washing by means of a Burning Spirit; it remains now to declare in what manner the Compactest Metals, and Precious as well as Common Stones, may by a dry cleansing Fire be meliorated. For a Spirit of Wine is much too weak to pierce the Bodies of Compact Metals, and to wash them to a

perfect cleanness; wherefore we are to look out for a stronger Wash-Fire, which may be able to Master the fixt as well as unfixt Metals. Now Art hands to us a certain dry Wash-Fire, wherewith the Ancients meliorated all Metals and Stones; but this dry Fire has never been published, neither know I any Author that hath writ plainly of it, save only *Paracelsus* in his *Cœlum Philosophorum*, where speaking of *Mercury*, he describes this flaming Wash-Fire, *viz.* ℞. Of *Tartar* part j. *Sulphur* p. ij. *Nitre* p. iij. being well mixed together, use them. *Paracelsus* calls this Composition a good fluxing Powder; but hints at other things, as appears by those words he places before the Description of the said Fulminating Powder, *viz. Pulvis adole Verbenas*, which words conceal a great Mystery, as will presently appear.

The Composition of *Paracelsus* may be meliorated by taking only one part of *Sulphur*, *Tartar* ij. and *Nitre* iij. and is a very good Wash-Fire. There be also many more and better Wash-Fires for to Purifie and exalt Metals, of which we shall hear anon. Follows now the use of the foresaid Wash-Fire.

And first it is to be observed, that to the end this Fire may have the better effect, the Ingredients must be pure, dry, and very well poudred, for by how much purer the Ingredients be, the stronger is the Fire. When therefore we have a mind to wash any Metal therewith, suppose impure *Sol* or *Luna*, we must file the same very small, and then mixing three or four parts of the said Powder with it in a Crucible, kindle the mixture with a red-hot Coal, and the Flame thence arising will consume all the impurities of the Metal, or separate them as dross, the pure Metals sinking as a *Regulus* to the bottom. And if the Operation be duly performed, the *Regulus* will be as

fine as if it had pass'd the *Cupel*.

If we desire yet further to increase the strength of this Fulmen or Wash-Fire, we may take instead of *Tartar* half the quantity of the Saw-dust of dry Lime-tree, which affords a much stronger Flame than *Tartar*, and consequently better purges impure Metals. With this strong Fire we may in a moment purifie a small quantity of *Sol* or *Luna* if we please, in a Nutshel; which I don't mention here as a thing of Profit, but only of Curiosity, and to shew the force of this Fire.

N. B. If we desire to make use of this Wash-Fire to Profit, we must not take a Common *Nitre* of *Sulphur*, but such a *Sulphur* as burns faster than the Common, and the *Nitre* must be purified, whereof more hereafter.

A Good Fulmen or powerful cleansing Fire for to purifie the Common Mercury*, so as afterwards it may be easily fixed.*

We are to know, that the Common *Mercury* contains in it self an extraordinary fiery Spirit, which hinders it from being a Compact Metal, and keeps it in continual Flux like a Molten Metal, and makes it so difficult a work to fix it: Now if we can but extinguish this Fire in him, he'l be easily reducible to a Compact Metallick Body.

It is notorious, that always a greater Flame overcomes and swallows up the lesser; to extinguish therefore this Fire in *Mercury*, we cannot do better, than make use of a strong Fulmen, which *Paracelsus* hints with those words, *Pulvis Adole Verbenas*, as if he had said, Go Fulmen and burn the Wings of that Volatil Bird, that he may flie no more. But the

Fulmen he there describes will not do it, a stronger must be made use of in that case. To this purpose I have made many trials in my Youth, but have found none better than the Fulmen of *Jupiter*, which takes as follows.

℞. Of Crude *Mercury* and fine *Jupiter* each j l. melt the *Jupiter* in a Crucible, and when it begins to cool, pour the *Mercury* upon it, and the heated *Jupiter* will take to it self the *Mercury*, and become an Amalgama, which Amalgama must with dry and purified *Nitre* be ground upon a Stone. This done ℞. of the strong Fluxing Powder abovesaid, the same quantity as the *Amalgama* and *Nitre*, and grind them well together, and then the Mixture is ready for kindling. But the Operation must be performed in the open Air, where the Wind may carry away the poisonous Fumes. The Mixture may be put into a strong Earthen Pot, and after Detonation, there will remain a Mass difficult to Flux, which being Cupell'd, and separated by *Aq. Fort.* affords a considerable quantity of *Sol* and *Luna*, abundantly recompensing the cost and labour of the Operation. After that the Mixture is kindled, the Matter must be often stirred with a red-hot Iron, to the end that no part may remain unkindled, but that the whole Mass may be red-hot throughout.

Another Fulmen to graduate Venus *into* Luna.

℞. Of the foresaid Fluxing Powder of *Sulphur*, *Tartar* and *Nitre*, and grind with it iv Ounces of *Mercury* of *Luna*, and lay the same weight of thin Plates of *Venus* SSS. with your foresaid Composition, kindle the Mass, and the proceeding Flames will graduate some part of the *Venus* into good and fix

Luna with considerable profit, the Operation being rightly performed. With the same Fulmen, ♂ may be graduated into ☉, and forasmuch as it doth not melt, it's better than *Venus* for this way of working; Needles are best for this purpose.

Another Rapid Fulmen changing Iron and Steel into Good Gold.

℞. Of the abovesaid Fluxing Powder, iv or v ʒ, mix with it j ʒ or half an Ounce of *Aurum Fulminans* precipitated from the *Aqua Regia*, not with *Salt* of *Tartar*, but with *Salt* of *Urine*; with this Fulmen and Steel Needles make SSS. in a Crucible. Let not the Needles be above j ℥ weight, else the Fulmen will not be able to graduate them wholly into *Sol*. This Process well managed affords a good increase of *Sol*. It is also no contemptible Curiosity to see Needles chang'd to *Sol*, their pristine form remaining. I took once 20 or 30 Needles, which I put with their points up to the midst in the said Fulmen, their upper halves remaining untouch'd by it, and after Fulmination took out the Needles, the lower part of which was pure *Sol*, the upper continuing Iron, which I distributed amongst my Friends and Lovers of Art for a remembrance. The same may be performed with Nails.

Now though in this Gradation of ♂ there be no very great Profit, yet neither is there any loss; and besides the Curiosity of it, is a convincing demonstration that ♂ without deposing any Terrestreity, may have it's whole Body changed into *Sol*.

N. B. The remaining Fulmen may with a little *Nitre* be melted down to a *Regulus*, by which means the *Sol* is recover'd, and so we have our graduated Needles

for nothing.

N. B. When we have a mind to make use of the *Fulmen* of ☉, we had best place the Crucible, in which the *Fulmen* and *Mars* is, in a large glased Earthen Vessel, and as soon as it is kindled cover the Crucible, that the *Fulmen* may not fly abroad, or if any does, it may stick to the sides of the Pot, which being wiped off with a Feather, may be reduced with the remaining *Fulmen* in the Crucible, that there may be no loss.

N. B. It happens sometimes, when too great a quantity of ♂ is taken to be graduated to ☉, and the Flame too strong, that the Needles melt into one, especially if they be laid too close together.

N. B. In Case, the Needles should not in the first Fulmination be wholly changed to ☉, the Work may be repeated with fresh fluxing Powder. And if any one desires more Profit from this Operation, let him mix some of the *Amalgama* of ♃ and ☿ with the Golden *Fulmen*, and Fulminate with the same Needles, or thin Iron Wier, by which means the ☿ will better diffuse the graduating ☉, or Spirit throughout the ♂, and so more of it becomes changed into ☉.

N. B. He that would draw considerable Profit from this Operation, had best perform it in a close earthen Vessel, with a large Recipient fitted to it, for to catch the ☿, which may be used again, by which means that gain will be more.

N. B. For to make this Work yet more gainful, we may instead of the ☉ mix with the *Fulmen* of ♃ and ☿, some fine powdred Red, Brown, or black Pebbles, which are found in running Water, and break as smooth as Glass, and contain much Volatile ☉,

grinding them well together. This *Fulmen* when kindled, drives the Volatile ☉ out of the Pebbles, and being received by ♃ and ☿ is fixed by them, by which means much ☉ and ☽ may be had out of ♃, ♀ and ♂. Out of these Pebbles with *Aqua Regis* much ☉ may be extracted, and tho' the ☉ in them be Volatile, yet partly by means of the *Aqua Regis*, and partly by being precipitated with the *Mercurial* ▽ out of ♃, and by Reduction it is fixed: Concerning which I have largely treated in the Seventh Part of the Prosperity of *Germany*.

N. B. To work on these Pebbles with more Profit, we may when reduced to fine Powder, extract them with ▽ in which common *Salt* has been dissolved, to which Extraction (which will be of a very high Colour) we must add some of the Resuscitative *Salt* of the World, every where to be found, and then abstract the Solvent from the Extract, by which means the Resuscitative *Salt* will make ☉ more Volatile, and separating it from the fixer Part, bring it over the Helm, in form of a yellow Liquor, which when mortified by a *Lixivium*, and reduced to a dry ☉, if then it be driven through a Retort, you will find a running ☿ *Sol* in the Recipient, in small quantity indeed, but of great Virtue; which by the Fire of *Artephius* may easily be fixed into an Universal Tincture for Men and Metals. A *Lixivium* may afterwards be poured on the remaining Extract, for to mortifie the Corrosive Spirits, and then distilled by Retort, it will yield some more *Mercurial* ☉. As for the fixt ☉ which was in the Pebbles, the same may be easily reduced, and will be good ☉, tho' somewhat pale Coloured, the *Salt* of the World having carried some part of the Colour over with the ☿.

N. B. Our Resuscitative *Salt* of the World is a very wonderful *Salt*, for when joyned with the dissolved ☉, it not only brings over a running ☿, but part of the Colour of ☉ with it, wherefore also the said *Mercurial* ☉ affords a most glorious Medicine, when duely fixed. In the same manner you may get a tinging ☿ from ☽, but much better, and easier from a ☽, which lies Volatile in its own Matrix, and has never touched the Fire.

N. B. But this *Mercurial* ☽ doth not tinge into ☉, but only into ☽. In the same way a ☿ may be driven from all Metals, and in considerable quantity. The ☿ of ♂ and ♁ are the best; those of ♀, ♃ and ♄ are good also, but not so high colour'd, as that of ♂ which is the best. Now to make ☿ of ♂, we need not dissolve common ♂, and thence with *Salt* of the World drive a ☿; but it is better to take Iron-stones, which have never touch'd the Fire, and having extracted them, add to them some of the Resuscitative *Salt* of the World, which then distill'd will yield more ☿ than common ♂. In like manner much more ☿ may be had from ♄, ♃ and ♀ Oar than from the Metals themselves.

I remember, that, in my youthful years, I laboured two years continually with a Person of high quality, to obtain a ☿ of ♄, we tryed all manner of ways but got nothing. Whether it was for want of Experience, or that the Process given us was not true, or because God did not see it fit for us, I know not: But this I know, that we had no knowledge of the universal Resuscitative *Salt* of the World, making use only of common S. *Armon*, and its Volatile Spirit.

I have, in the Seventh Part of my *Pharmacopœia Spagyrica*, taught a way to draw a running ☿ from Metals, but in small quantity, whereas by means of

this *Salt* of the World, much more is obtained. I say therefore, that if from my last published Writings, Men cannot discover the way of making the *Mercuries* of Metals in good quantity, it will be a sign to me, that God will not permit it, having plainly set down every thing, except the Resuscitative *Salt* of the World.

And I now say again, that the said *Salt* is no where to be sold, since enough may be had for nothing. God must reveal it, for Men will hardly do it. It is a mere Gift of God to know this *Salt* and its Use. *Turba* saith concerning it: *If God had not created this* Salt*, it were impossible to perfect our Elixir*. From whence we may see, it is no *Salt* prepared by Art, nor made with hands, but created of God of nothing. Consider well what is here said, and you'll find Wonders. *Cosmopolita* speaks after this manner of this *Salt*, *viz. Nature affords us a* Chalybs*, which can from the Rays of the Sun extract that, which many have sought and not found.*

Other Philosophers speak of this *Salt* in these Words: *The Spirit and Salt of the World, bring the Souls of the dead out of Hell.* What is this Hell, but a *Stygian* Water, wherein we dissolve Metals, and after draw forth their Souls with the *Salt* of the World. Of which Spirit and *Salt* of the World, *Nuisement* hath writ a curious Treatise. I say therefore, that he who understands the due way of applying this *Salt*, for drawing the ☿ of Metals, has obtained the greatest Secret in the World, the said ☿ being easily fixable into a true Tincture.

I have known several, who could fix the ☿ of ♄ and ♁ prepared by others into Tinctures, but could not prepare the *Mercuries* themselves: And to this day, I do not know one Man that can bring a running ☿

from Metals, tho' I have communicated the way of making the said ☿ to many, as it is set down in the Seventh Part of my *Pharmacopœia Spagirica*: But seeing so small a quantity prepared that way, they let it drop. It had been well, they could have been satisfied with that: But Men generally are of such a Humour; that if they cannot have all without Toyl or Labour, they presently despond and give over; but they that persevere to the end shall obtain the Crown of Honour.

Thus much shall suffice, by way of Parenthesis, concerning preparing the *Mercuries* of Metals in great quantity, by means of our Resuscitative *Salt* of the World.

Let us now return to our dry wash-Fire, and see, what further may be done with it. We know, that with a Rapid and violent Flame, the Volatile part of Metals is driven away, the fixt and grosser staying behind: As for Example. If I dissolve a Metal, or Mineral in *Aqua Fortis*, and afterwards add to the Solution some good *Niter*, by this means the Metal abides with the *Nitre* and shoots with it into Crystals, which from ♂ are Red, from ♀ Green, from ☿ and ♃ White, from ☉ Yellow. When now this *Nitre* is kindled, the Volatile part of the Metal sublimes from the grosser, and is better for Medicinal use, than the gross Body of the Metal.

N. B. But if to this *Niter* impregnated with a Metal, we joyn some *Salt* of the World; and then detonate it, the said *Salt* through the Flames carries the immortal Soul of Metals out from Hell, that is the ☿ of them, which afterwards may be fixed into Tincture. The said *Nitre* impregnate with Metal, and the *Salt* of the World, doth also, by means of a swift Flame draw the Colours from precious and common Stones, and

introduceth others, and better into them again; which is a thing of great Profit to him that hath Skill of it. This is the speediest way of meliorating Metals, when by means of a Rapid *Fulmen*, as it were in a moment, we Separate the pure Soul, or incombustible ♃ from the gross Metal: For in this quick Flame the superfluous ♃ of the Metals is consumed, which ties the pure ☿ to the Metal, and makes the same difficultly separable from its gross Body.

In this manner a pure ☿ may in quantity be drawn from all Metals, and as much ☿ as is got this way, so much Tincture, for every ☿ of Metals is fixable into Tincture, which cannot be said of the common. And yet amongst these *Metallick Mercuries*, one yields a better Tincture than another, the ☿ of ♂ as hath been said being the best, tho' that of ♄ be good also. He who is come so far as to be able to make the ☿ of any one Metal, with the help of the *Salt* of the World, may easily do the same with all the rest, and then try which ☿ is the best. I have tryed several, but found none better than that of ♂. For which Reason also sometime before my falling Sick, I bought up a great quantity of Steel Needles unfit for common use, with intention to make a great quantity of ☿ of ♂, but being seized with Sickness not long after, and continuing Bed-rid till now; my design was hindred. Now whether God will be pleased to raise me, that I may prepare a good quantity of the said ☿, for those that come after, I know not; for at present by reason of my Weakness, I have no hope to do any thing. And therefore have determined with my self, to manifest these and the like great Secrets to the World, as far as my Weakness will permit; that they who are Lovers of Art may know, and work them, or let them

alone as they please: For it shall suffice me, to have discovered the wonderful Works of God to mankind, not at all concerning my self with the rest.

'Tis here to be noted, that the ☿ which by means of the Salt of the World, in the moist way is drawn forth from *Aqua Fortis*, or other like corrosive Liquors, is purer than that which, in the dry way is forced over with a strong Fire, yet both are good, and fixable into Tincture. It is also less trouble to bring over the ☿ of Metals in the moist way, than by a strong Flame. For when a Metal is dissolved in *Aqua Fortis*, and *Salt* of the World added to the Solution, then if by *Alembick*, you separate the *Menstruum*, part of the ☿ will come over with it, which, as before-mentioned, is to be separated from it: Afterwards drive what remains in the *Alembick* through a Retort, and the *Salt* of the World will carry more of the ☿ over, by which means a good quantity of ☿ will be obtained. For which God be praised, who hath shewed us his poor necessitous Children so near and strait a way to the Land of *Promise*. For I still say (as I always did) that nothing more excellent can be found, either in Physick or Alchimy, than the ☿ of Metals, all other Works being mere trifles in Comparison of it: Because such a ☿ well fixed, is not only the highest Medicine, but besides Tinges ☽ and ☿ into ☉. I have clearly and fully described the manner of it, Preparation, save only, that I have not named the *Salt* of the World, because it is such a vile and contemptible thing, and cast out upon Dunghils: And yet nothing in the World lives without it. No living Creature in or upon the Earth, Bird in the Air, nor Fish in the Water is sustained without this Universal *Salt* of the World. Concerning this *Salt* of the World, or true matter of the Universal great Stone of the Philosophers, an unknown Author in the

Thirty fifth Chapter of his Book writes thus,

That the first Work of the Elixir, is every where to be found.

Concerning the true making of the Elixir, as to its first Work, the Philosophers say, that the true Matter is every where to be found; because it is in every Man, and found with every Man. *Adam* brought it with him out of Paradise, and when he died took it along with him to his Grave. And therefore an Allegory of the Wise men saith, that the said *Matter is subtilized* ☉, that is ☉ advanced to the highest pitch of mineral Virtue. Concerning this ☉ it is said: *With our Gum and little* ☉*, we can buy much*. And, *Albertus* in his Book of Minerals saith, and proves it, that ☉ *is every where to be found*: Because there is nothing made of the four Elements, in which, after its highest refining, ☉ is not to be found, and therefore they say it is every where to be found. The same *Albertus* also asserts, that *a great Mineral Virtue is in every Man*, especially in his Head between his Teeth: For that in his time, in old Graves ☉ was found in little longish Grains, between the Teeth of dead Men Skuls, which could not be, except the said mineral Virtue were in Man, which mineral Virtue is in the Matter of our Elixir. And therefore it is said, that the Stone is in every Man, and that *Adam* brought it with him out of Paradise, *&c.*

The Philosopher tells us here, proving it by several Authors, that the true Matter of the Elixir, as to the firstl Work, is to be found with every one: Concerning which Matter, much might be said, but it is better be silent for fear of the abuse of wicked Men. Yet I cannot but hint here, how it may be made out, that ☉ can grow in the Skuls of dead Men, as

before-mentioned. It seems probable then, that these were the Skuls of such Men, who in their Life-time much used ☿, either taking it inwardly, or much handling it in their Trades. Now it being the Property of ☿, to mount upwards to the Head, and settle between the Teeth, we may suppose, that by length of time the *Microcosmical* ♆ did Coagulate it into ☉. Let no Man think this impossible, for the ♆ of Mans Dung hath a very great affinity with the Mineral ♆, which no Body can better witness, than he to whom God hath revealed it, and who hath found it true by Experience.

The Reader by this time hath sufficiently perceived, how the *Mercuries* of all Metals may with ease be brought over, by means of the *Salt* of the World; as also, how the same may be had with the help of a *Fulmen*, or strong Flame of Fire.

Now he that is Master of these *Mercuries*, will not be far to seek, for the way of fixing them; for which there is no nearer way, than to maturate them to a Tincture, by means of *Artephius* his Fire, for all other ways are very tedious, concerning which fixation by the said secret Fire, the Reader will find more in other Parts of my Writings.

Herewith, then I conclude this First Part of my Purgatory, or cleansing Fire, with which all unclean black Subjects may be washed to the highest degree of Purity and Whiteness. If by chance, I should here have omitted one or other Circumstantial of the Work, (as I hope not) I shall, as it comes to mind, set it down in my following Writings. In the mean time Farewel, and remember the *Salt* of the World, learn to know it, and its Use, for so thou wilt be able to make the *Mercuries* of all Metals, which in value exceed all ☉ and precious Stones.

An Advertisement to the Courteous READER.

Forasmuch as in this little Treatise, I have revealed many Secrets, and particularly, the easie Preparation of a running ☿ from all Metals, and that a true Tincture cannot more readily be obtained, than from such a ☿, which with ☉ becomes fixed to a Red, and with ☽ to a white Tincture, and that this Fixation is most easily performed by the secret Fire of *Artephius*. And have also taught, how from all Vegetables and Animals, a most excellent ☿ of great Virtue may be prepared, by means of a burning Spirit; in all which I have writ nothing, but what I have wrought with my own hands. I know there will not be wanting some envious and ignorant Men, who will pretend it impossible to get a running ☿ from Metals: But it is no wonder, that this is counted impossible by those, that have not attained to great Skill and Experience in the Fire, who may well be compared to little Children, who when they hear any Body talk of the Great World, can form no other Notion of it, than of the place, or House where they have been educated; neither can such ignorant conceited Persons believe any thing, but what they have seen themselves. It is enough for me, that I know it to be true.

Now forasmuch as I have before declared, that this ☿ of Metals is the nearest way to attain an universal Tincture, for Men and Metals, and that out of Vegetables, Animals, and all other things, that admit a Separation of Elements, a ☿ may be had, as well as from Minerals and Metals, and from that ☿ a Tincture: I intend here for further Confirmation, to add the Testimony of an old Book, which with many words confirms what I have writ, concerning the ☿ of Minerals, Animals and Vegetables, and therefore

have thought fit, to subjoyn the Conclusion of the said Book, as an Appendix to this Treatise, by which, those, who understand, will perceive that I have writ the Truth, concerning the ☿ of Vegetables and Animals. The Author is unknown to me, but that he was an experienced Philosopher appears from his Writings, which contain great Truths: These as they were gladly received by us, so we highly recommend them to all Learners, and Lovers of Art: Here follow the two last Chapters of the said Philosopher.

A Recapitulation: Or, Summary Repetition.

We have sufficiently explained to thee the thing, if thou hast rightly understood our words. And observe, Son, that the Operations we deliver in this Book, concerning the Composition of the Great stone, are more subtil than those, that *Geber* has delivered in his Summ: For he saith, that in different intervals of time, it is first sublimed, next fixed, afterwards calcined and then dissolved, and so of the rest. But as to this our Book, know, that the Distillation by *Alembick* we call Sublimation, and the Solution of Bodies, we likewise call Sublimation, because by this means the Earthly Body is lifted up into the Air, which is Heaven. Wherefore know, that when we dissolve, we at the same time do Sublime, Calcine, Purifie, Wash, conjoyn and separate. To this purpose, *Haly* in his *Secret* of *Secrets* tells us, that between the Solution and Conjunction, or the Matrimony and Union of Body and Spirit; there is no distance of time; because when the Body is dissolved, it is by that Solution joyn'd with the Spirit, and therefore he saith, that Solution and Conjunction are at the same time. This therefore is the Order of our Operation, which is done at once in one hour: When our Body is

put to dissolve in Water, then presently it is solved and sublimed, and by being dissolv'd and sublim'd, the Body becomes united to the Spirit; and if any thing of an extraneous Nature be mix'd with the Body, the same will not be dissolved, but will remain in the bottom of the Vessel for to dissolve, and thus the Body becomes cleansed of the extraneous Matter, if any be in it; yet is it in some sort sullied, nor is it so clean and clear as it ought. Wherefore our Operations in making the Great stone, are more subtil than those contained in *Geber*'s Summ, because what he says is done at several times, is here done at once, and of a subtiler Matter; and after a subtiler manner. And when thou shalt see our work, dearest Son, then wilt thou know, that we have spoken the Truth, tho' not before: And indeed, except thou shalt give good heed to it, and sharply consider of it, thou wilt scarcely perceive it to be so, because of the quick, subtil and short Operation. But be sure to avoid the fumes in this, as well as other ways of making the Stone, as far as is possible, which if thou shouldst take in, would greatly hurt thee, either at the very instant, or not long after, except thou hast Remedies at hand to oppose their Malignity, which thou oughtest always to be provided with, that as soon as any such thing is perceived, a proper Antidote may be taken.

CHAP. LVI.

From all that hath been said from the beginning hitherto, may be gathered by a piercing eye, that in our Operation our Bodies do not abide in the top of the *Alembick*, as the Bodies of Fools do: Of which *Aros* saith: *The Bodies of the unwise, do only stick to the Cover or Head of the Vessel, and therefore they cannot effect any thing that is true*. Hence also may be

gathered, that *Sulphurs* are retain'd by ♃, Bodies by Bodies, and Spirits by Spirits; and every imperfect thing is perfected by one thing, that is by ☿ alone, that is, by a substance, which is produced by our foresaid famous, excellent and glorious Magistery. Wherefore for a final Conclusion we say, that the Blessed stone is one, the Medicine one, to which nothing extraneous is added, nor taken from it, only its superfluities removed. Understand this, as *Hortulanus* saith: That, *That is not extraneous, into which it must be changed*, that is fixed, *viz.* ☉ and ☽. Therefore this stone is Mineral, because it is produced from all Mineral things. But because *Hortulanus* saith, that *Hermes* the Father of all *Alchimists*, was Possessor of the three parts of Philosophy, of the whole World, *viz.* Mineral, Vegetable and Animal: The true knowledge of which three Kingdoms, the said *Hermes* had joyntly, or severally in the work of the Sun; which parts are contained in one only Stone, *viz.* in ☿, that is under the name of ☿, because every thing of which the Stone is made, whether it be Animal, Vegetable or Mineral, is called by the name of ☿. We have also before shewed, how this Philosophy, or Science is compleated in the work of the Sun, by means of a Mineral ☿. Now to the end that this Science, or most excellent Point of Philosophy, may be perfect in every Point, we must see how this Stone may be had, by means of a Vegetable ☿, from Vegetables, and by an Animal ☿, prepared from Animals. And first, we will shew how the Stone may be made, with a Vegetable ☿: For except the Great stone might be made from many other things, besides those mentioned in the former part of my Discourse, that saying of *Alphidius* would not be true: That *there be many other Subjects, which solve and congeal*. And

Hortulanus saith, *the Philosophers have called every thing, the Stone, from whence the Four Elements may be separated, by our Chymical Artifice*: Now this may be done, from every Vegetable and Animal; wherefore from every Vegetable or Animal, may the Great stone of the Philosophers be prepared.

The two last Chapters of this Anonymous Philosopher, contain a short Repetition of the Matters handled in his whole Book, wherein he asserts, that the Preparation of the great Elixir, he sets down, is far more subtil, excellent and Skilful, than that of *Geber*: Because the Operations which *Geber* doth successively, one after another, he shews, how they may be done all at once; for that when he dissolves, he at the same time, in the same Vessel, with the same degree of Fire, and in the same Furnace, doth also Sublime, Calcine, Cleanse, Wash, separate and conjoyn: Because, when the hard Body is put into the dissolvent, to be dissolved, it presently turns Black, and is throughly dissolved, calcined, sublimed and joyned with the Spirit. And I leave it to every judicious Person to judge, whether this way must not be very ingenious and Artificial, which at once, so easily and suddenly finisheth all these Operations, belonging to the work of the Stone. Neither was it without Reason, that the Author affirms, that the possibility of this Accurtation cannot well be believed, or apprehended by any, but those who have seen it.

N. B. Now that all these Operations may be done at once, my self can witness, as having before my Sickness performed the same with mine own hands. And however this may sound very strange to those, whose Experience never reached so far, yet is it an undoubted Truth with all those, whom God hath

been pleased to illuminate, giving them the understanding and performance of this great (I had almost said, Holy) work.

Our Author in his last Chapter concludes, that of all things from whence the Elements can be separated, the Stone of the Philosophers may be made; to the Truth of which, also I can set my Seal. For when about half a year since, I had recommended to an old Friend of mine, the manner of preparing the ☿ of Wine, and that the said Friend by reason of his business could not come to me, to overlook the Work himself, because he lived in another City, and I by reason of my Sickness kept my Bed: It was concluded by us, that a third Friend should come to my House, and carry on the Work, from the beginning to the end, which accordingly was done in three or four Days. But forasmuch, as in so short a time, we could not prepare any great quantity of the Spirit of Wine, we had but little to burn away, and consequently could not get much ☿, or Cælestial ☉. Now it happened, when we were separating the ☿, we had caught, from the Phlegme, that the Fire, by mistake was too strong, so that after the Phlegme was come over, we found the remaining Heavenly *Salt*, or ☿ of Wine in the bottom of the Glass molten to a Red stone, which could not be dissolved with common Water. Whereupon I ordered some *Aqua Regis* to be poured into the Glass, to dissolve the ☿, which presently succeeded, the Solution being Blood-red. But the ☿ being by this means spoyled, as to any Medicinal use, I resolved to try what it would do on Metals, and accordingly put a little piece of fine ☽ into the Red Solution, left it there two days, and then taking it out, found it changed into ☉ as far as could be judged by the Eye, or Touchstone. But because I could hardly believe,

that ☽ could be so easily turned to ☉, I put it into a strong *Aqua Regis*, to see whether it would be dissolved in the same, as other common ☉, and put a piece of common ☉ with it, to try which of both would be first dissolved: Whereupon I found, that the *Aqua Regis* rather laid hold on the common ☉, than my transmuted ☽, the half of which was only dissolved, and I have the other Part still to shew. Which tryal made me so desirous of proceeding to another, that I got a new instrument prepared, for to make the ☿ of Vegetables and Animals, but have as yet been unable to undertake the Work, by reason of Bodily weakness, and for want of some faithful assistant. Yet am not without hopes, but that with the first I may make some further Tryals, all things being in a readiness for the Work, to which God be pleased to afford his Blessing, *Amen*.

From this Relation it is evident, that a Vegetable ☿ is able to meliorate Metals: That it excels for Physick cannot be doubted, and therefore the said ☿ may be called a Master in both Faculties. Now if a Vegetable ☿ will do this, what may be expected from a *Metallick* drawn from pure Metals, and brought over by the Spirit of Wine? Without doubt, much more than the ☿ of Wine alone, without any Metalline addition. If it please God, I intend to second this Treatise with another larger, concerning the ☿ of Metals. In the mean time, I here make an End.

OF THE
Secret Fire of Philosophers.

By which, They not only brought to Maturity their Universal Medicine, but also fixed particularly all the inferior Metals, into good Gold and Silver, with great Profit.

Written for the Sakes of all the Lovers of Divine and Natural Wisdom.

Faithfully Translated out of the High-Dutch.

Reader,

Seeing that in several of my Writings, I have made mention of the secret Fire of *Artephius*, which *Pontanus* very well called *Proprium Agens*, for no better name can be given it. I thought it convenient to publish this small Explication of it, that it may be known to those, who have not yet heard of it, not doubting, but by this discovery a great Light will be opened to all the Lovers of *Metallick* improvements: For almost all Philosophers, in their Writings, are dark concerning this; and yet without this, no great Matter is to be effected in *Chymistry*: Which daily Experience sufficiently testifies. Therefore I am

resolved briefly to explain, yet fundamentally and plainly, by Gods help, this thing which hath been so long hid from the World.

Of the Secret Fire of Philosophers, by which they have maturated their Tinctures.

First you must know, that no Philosopher hath made any mention of it, but hath passed it over in silence, only that ancient Philosopher *Artephius* hath taken some notice of it, but so obscurely, that very few of his Readers, have been able to learn any thing from him. He saith, that himself, like others, had been covetous and envious, so as to write nothing of it; but after he was nine hundred years old, he first began to write of it. *N. B.* It is not credible, that he should have lived to that Age, but perhaps some Body hath added a Cipher to it. 'Tis like he was ninety years of Age, for the Ancients have often mistaken an hundred for ten. But be it as it will, he was the first, that said any thing of this Fire. *Pontanus* writes in his Epistle, that although he knew the true Matter, yet he erred two hundred times, and should never have obtained it, if he had not learned the secret from his Writings. The reason of hiding this Secret so long, hath been only the wickedness of Men, who seek not after these great things, that they might honour God, and succour the Poor, but rather, that by great Riches they might be able to enslave their Neighbours. But when such Men, who have forsaken the Vanities of the World, seek after them, God puts it into their hands, so that striving nor running in this helps nothing, but only Gods blessing. Observe this well, and thou wilt not err. If our eyes and hearts were not blinded by the Pride of the Devil, we should easily see and know, what Fire nature useth in the Earth, to bring Metals to

Maturity: By which we might easily learn, what Agent the Artist wants to maturate and bring to perfection all imperfect Metals into Gold and Silver, as good as if Nature had done it in the Earth. Now when we open our eyes and look about us, we find nothing else, but an *Acidum* or Universal Agent, that is, the Sulphurous Salt of *Vitriol*, by which all Metals in the Earth are generated, so that some, by a long time are fixed, and some by a less time, partly remain unfixed, according as the Oars contain more or less of this Agent. And if by a strong Fire, one should melt this Metal out of the Oar, the greatest part of the *Acidum*, together with the Rocky part would come into a Cinder or Slate, but in the Metal, although it be melted and hammered, there yet remains some of the Agent, which the Fire, in the first melting, could not separate from it, especially when the Metals are yet crude; as if the Agent should say, I will not be separated from my Patient, for he cannot yet subsist without me, and also saith the Patient, I cannot yet suffer my Husband, or Agent to be separated from me, for we have not been long enough together. But when the melting Fire comes to it again, then no excuse will serve, but the stronger overcomes the weaker, and the Agent and Patient must part by force. Now what in this violent Separation, the one can carry away with it of the other, it leaves not behind, as we see when the Oar of Iron is melted, that the violent Fire, forceth away the Agent from the Patient, and converts it into Cinders, but yet these are not purely Cinders, for they have attracted a great quantity of the *Mercurial* Patient, *viz.* Iron, which is not turned into Cinders, for if they be melted again, you will have a good quantity of Iron out of the Cinders, and this may be done for several times. If the Agent and Patient had

not a great Agreement, they would certainly have been more nearly parted in the first melting, and there would be no need of a Second or Third Fire, and if the Agent should be separated from its Patient, by the force of Fire against its Will, yet it cannot be exactly and wholly separated, but the Patient as the Female *Mercury*, doth its endeavour to retain as much as it can of its Agent, or dear Sulphurous Husband with it self, as we have sufficiently seen, that no melted Iron is found without its Agent or *Acidum*. Which appears, if upon a Plate of Iron, you pour a little Water, it presently Rusts, which could not be, if there were no *Acidum* in the Iron; for the *Acid* adhering so close to the Patient, the melting could not force it away. Now when Rain water falls upon it, the *Acidum* out of Love attracts it to it self, and works to its utmost Power, upon the Patient, so that it becomes Rusty.

Which doth not so happen to such Metals, as are already brought to sufficient Maturity, and therefore have no more need of the Agent, as Gold and Silver, for after they are melted, they do not Rust by Wet, for their *Proprium Agens*, or *Vitriolick Salt*, has done its Office, bringing its Patient to Maturity, and therefore is easily separated from its Patient in melting. Copper also, in melting, still retains somewhat of its Agent, and therefore easily Rusts, yet not so easily as the Iron, because it retains not so much of the *Acid* in melting, as Iron doth. Lead and Tin retain less of it, than Copper and Iron, and therefore do not so easily attract the moist Air and Rain, but only lose their Splendour by it. Gold and Silver retain but a very little of it, and therefore they cannot easily Rust, but being moistened with strong Corrosives, lose their glorious Luster: *Mercury* retaineth all its *Proprium Agens*, having lost nothing

of it. It is also to be observed, that although *Sulphur* (which contains in it self a pure vitriolated *Acid Salt*) be an Universal Agent, by which Nature in the Earth generates and maturates all the Metals, yet notwithstanding every Metal hath besides *Sulphur*, a particular *Proprium Agens*, which assists the Universal Agent in its Action. Gold hath, besides the Universal Agent, somewhat of common *Salt*. Silver and *Saturn* have besides the *Sulphur*, and *Vitriolick Salt*, somewhat of *Saltpetre*. *Mercury* hath properly for its Agent, a subtil, fiery and concentrated Spirit of *Saltpetre*, which keeps him always fluid and current. And this is the reason, that Salts or Spirit of *Salts*, (as Spirit of *Vitriol*, common *Salt*, *Saltpetre*, *&c.*) do more easily dissolve such Metals as participate of their own Salts; for example, Silver, *Saturn* and *Mercury* participate (besides *Vitriol*) of a nitrous Salt, and therefore Spirit of *Nitre* doth easily work upon those three Metals, and dissolve them: For because these three Metals have a nitrous Salt in them, therefore the Spirit of *Nitre* hath a good Friend in them, which opens the Gates to it, and lets it in, for the Friend within corresponds with him which is without, as for Example: If an Enemy set down before a Town to take it, and hath good Friends within, that open him the Gates, he may easily enter, but if his Enemies that are within defend themselves, and resist him, he can do nothing, but must march off without it. Seeing that an *Aqua Fortis* made of *Vitriol* and *Saltpetre*, doth readily touch and dissolve only Silver, *Saturn* and *Mercury*, it comes to pass from their near Relation; but the reason why they touch not Gold, is, because it hath no affinity with them, for Gold hath no Spirit of *Nitre*, but of common Salt in it, but if you put a little common Salt to the Spirit of *Nitre*, it then easily dissolves Gold, becomes to be of another

Nature, and then will not dissolve Silver, but Copper, Iron and Tin, because these Metals contain much spiritual Gold, and therefore are easily dissolved by this Spirit of *Salt*. Now because I have here shewn the reason, why an *Aqua Fortis* made of *Vitriol* and *Saltpetre* dissolves only Silver, Lead, and *Mercury*, and not Gold, and when common Salt is added to it, that it dissolves Gold and not Silver, it is for the same reason, that Salts dissolved in Water, and impregnated with the Universal *Acid* or Oyl of *Vitriol*, will as well dissolve the Metals, which are boyld in them, as their Spirits will. For Example: Suppose I had no *Aqua Fortis*, and yet would dissolve Silver; I could do it as well by dissolving *Saltpetre* in common Water, acuated with the true Oyl of *Vitriol*, but yet not so easily as *Aqua Fortis*, and if you should add a little common Salt to it, it would not touch Silver, but dissolve Gold. And suppose, I had no Oyl of *Vitriol*, and yet would dissolve Gold, I might do it by dissolving *Saltpetre* and common Salt with Allom in Water; yet not so well as by *Aqua Regis*. This is not said to that end, that I would advise you to dissolve Metals by Salts and Oyl of *Vitriol*, (for the distilled Waters are better than the undistilled Corporeal Salts) but that you may the better understand and comprehend with what Salt each Metal hath an Agreement to unite easily, that you may the better learn to know the *Proprium Agens* of each Metal, for if you will do any excellent thing, in the Metals by their *Proprium Agens*, you must first know them well, by which you will know, what every Metal Loves, and how it will be treated: Now we cannot learn this better, than when we consider, what Spirit, or Natural Agent was driven from the Metal by the melting Fire, which if it had remained longer in it, in the Earth, the Metal would have been maturated by

it. We find, that in all Oars of Silver, Lead and *Mercury*, is found a nitrous *Salt*, which is driven from it by the strong Fire, now if such a Metal being immature, and not only taken too soon out of its Matrix, but also by the melting Fire deprived of its Fecundative Spirit, is to be made grow again to be meliorated, you must of necessity restore that to it, which the Fire hath taken away. Now because from Lead there is taken away a nitrous Spirit, besides common *Sulphur*, you must restore a nitrous *Salt* for its Agent. And because from *Mars* and *Venus*, a *Vitriolick Sulphur* was taken away, that must be restored to them again. And because from *Jupiter*, in melting, an Arsenical *Sulphur* and Spirit was taken away, you must restore it again to the dead Body, to revive it, and to make it grow. If from Gold its Sulphureous Salt be taken away by melting, which the Gold easily lets go for the reason already alledged, and yet you would maturate this Gold farther, and make it yet better than Nature hath done, you must put it into its Matrix again, uniting it with the Sulphureous Spirit of *Salt*, and so let it generate or grow afresh, and you will receive more than Nature hath given: For Nature can give no more, but a perfect Body, which if you will have yet more perfect, you must put it again into its Matrix, with its natural Agent, and by the help of external Fire, awaken or excite the inward natural Fire, that its Body may be maturated into a more than perfect Tincture. For Nature can give no more than perfect Bodies, *viz.* Silver and Gold: But if Art begins again where Nature left, it can make the perfect Bodies more than perfect, with this more than perfect Tincture, you may in a moment bring to perfection the imperfect Metals, if you put it to them in melting: To which perfection, a great many years

would have been required, before their *Proprium Agens* could have brought them. For if you would maturate the imperfect Metals into Gold and Silver, by their proper Agents, it would require a long time, but yet it might be done with very great profit, for no other costs are required, but outward Fire, to keep the inward Secret Fire in continual Action; and this work of maturating the inferior Metals may be done in as great a quantity as you please, which makes the profit so much the greater, and this fixation requires no great Cost, for *Mars*, *Venus*, *Jupiter* and *Saturn* cost but little, and the Agent may also easily be had, so that all the Expence is only the Fire, which yet will not be very chargeable neither, so that this Fixation may every year bring in great profit to him that well understands it. If I was younger I should not forbear to go about this particular Melioration of Metals in the whole, to do good with it to many thousand poor People, but my time is now past. God hath been pleased not to shew me this light till within this three years, in which I have lien in Bed, and so I can expect no great benefit by it, as having no Children who are fit to carry it on. But because I can do nothing more my self, I commit it to others, to whom I have already given a good insight; but to discover it more clearly and indiscriminately to the good and bad, being restrain'd by several Reasons I dare not do it. Now it yet remains to give a hint, how the perfect Metals, as Gold and Silver, must be ripened into a more than perfect Tincture, to make the imperfect Metals perfect by Projection.

Now here followeth a Fundamental Process, without any Legerdemain, how to bring Gold and Silver into a Tincture.

℞. Of Gold j ʒ, of Silver iij ʒ, dissolve the Gold in

Aqua Regia, and the Silver in *Aqua Fortis*, pour these two Solutions together, and the Silver will attract the Gold, and they will both precipitate into a gray Powder, but if for want of Salt they should not easily precipitate, pour into them some Salt Water, for the Silver will not fall except there be Salt enough. When nothing more will precipitate, it is a sign that these two Bodies, like Husband and Wife, have embraced each other, and are united; then set the Glass in which they are in Sand, that the Liquor may boil, and those two Bodies will be the better united; stir it often, and let it stand so warm for 24 hours, then let it cool, and these two Bodies will grow up together like Herbs or Flowers, filter the Liquor from the Calx, and sweeten the Calx with Common Water, dry it and powder it well, then it is ready to be fixed into a Tincture with the *Proprium Agens* or Secret Fire. Now concerning the proper Agent of Gold and Silver, I say that it is a Mercurial Antimonial Water, which also *Artephius* Confesseth; To obtain which, proceed thus: first put the Conjunction of Gold and Silver into a clean Crucible, which put into a Coal Fire, so that the Gold and Silver may become warm in the Crucible, and yet not be red-hot nor melt, and the sharp Spirits which remained after Edulcoration will pass away in Smoak; when it Smoaks no longer, take it out of the Fire and let it cool, and weigh the Gold and Silver, and so you will perceive how much heavier they are than they were before, for so much have they taken from the Spirits of the Salts, which dried Salt Spirits must prepare the *Antimony*, our Secret Fire, or *Proprium Agens* to fix the Gold and Silver into a Tincture. For Example: We have dissolved and precipitated j ʒ of Gold, and iij ʒ of Silver, and after the exsiccation of the *Calx*, it weighs vi ʒ, and so ij ʒ of the Spirits of the Salts are Coagulated with them,

and make the increase. For this you must know, that Silver hath this Nature and property, if it be dissolved in *Aqua Fortis*, and precipitated with Salt it attracts much Spirit from the *Aqua Fortis* and Salt, which Water cannot wash from it; but Gold attracts not so much as Silver, for the Gold attracts *Nitre*, and the Silver Common Salt. I could easily shew the reason of this, but that it would be too tedious. *Saturn* attracts more Common Salt than Silver, and these Spirits of Salts are also a *Proprium Agens* to *Mars* and *Saturn*, as they are to Silver and Gold, and work upon *Saturn* and *Mars*, altogether in the same manner as on Gold and Silver, the only difference is, that the Tincture of *Saturn* and *Mars* is not of that extent as that of Gold and Silver, although both of them in this work have one and the same Agent: Now this Agent which is Spirits of Salts Coagulated, as well in Gold and Silver, as in *Saturn* and *Mars*, must first be brought into a Mercurial Water, before they can rightly act upon Metallick Bodies, by penetrating, maturating and meliorating them; to bring them to which, you must proceed thus: If the four Ounces of Gold and Silver have Coagulated two Ounces of Spirits of Salts, you must add to it two Ounces of very clean and well pulverised *Regulus* of *Antimony*, grind them very well together, put this Mixture into a Coated *Retort*, and distil the Mercurial, Antimonial Water, which will also carry over with it the *Animæ* of the Gold and Silver, in form of Butter of Antimony, yet of a high colour, for the Anima of Gold is highly exalted by the *Antimony*, or Mineral *Aries*. This red Solar Butter is the Secret Fire of *Artephius*, or the *Proprium Agens* of *Pontanus*, to bring the Gold and Silver into a Fixed Tincture, which *Artephius* hath used for Gold and Silver, but *Pontanus* (as appears by his Epistle) did not make his

Tincture out of Gold, but out of *Mars*; for he calls God to Witness, that the matter of his Stone, out of which he prepared his Tincture, contained many Terrestreities and Superfluities, which he did not separate from it, and yet the *Proprium Agens*, together with what was good in it, *viz.* Iron, came to be a Tincture. Out of this sufficiently appears, that he did prepare an impure Metal, as *Mars*, into a Tincture.

And this is very credible, for such a fiery Agent which I have taught here to prepare, is as well a true Tincture it self, as the *Animæ* of *Sol* and *Lune*, and that so high that it is sufficiently powerful to penetrate, meliorate, and transmute hard, gross, and impure Metals and Bodies, by its tender, clean, Golden, Mercurial Power, and to reduce them into Tinctures. *N. B.* I would have none to doubt, but that such a clean, fiery, and Golden Agent, when it is used for the exalting and meliorating of clean Gold and Silver, will give a much higher Tincture than with gross and unclean Metals; for if Gold is inwardly so exalted and meliorated by this Antimonial Mercurial Water, it must needs give a far more extensive Tincture. Now how this our Mercurial, Antimonial, Saturnine Water, is to be applied to fine Gold and Silver, to exalt their Colours, and transmute them into Tincture, I shall here shew to the best of my knowledge, and it is thus. The two Ounces of Spirit of *Salts*, which were coagulated by the four Ounces of Gold and Silver, and by the addition of two Ounces of *Regulus* of *Antimony*, did again leave the Gold and Silver, by working upon and dissolving the *Antimony*, and did in the distillation carry over the most pure and tender *Mercury* of *Antimony*, together with the Tincture of Gold, in form of a Red Butter, for *Antimony* is of this nature, that it draws the colour

out of Gold, and carries it up with it self in Distillation, which the Ancients called carrying the Souls of the Dead out of Hell. This Red Butter impregnated with the *Anima* of Gold, *Artephius* called his Secret Fire, and is the *Proprium Agens* of *Pontanus*, which doth not only maturate Gold and Silver into perfect Tinctures, but also *Mars* and *Saturn*, in their whole substance, without separating the pure from the impure. From the remaining Gold and Silver you must wash your *Regulus* of *Antimony* by the help of Salt Petre, then separate your Gold and Silver by *Aqua Fortis*, and you will have no loss but only of the Tincture of Gold, which the Oyl of *Antimony* hath carried over with it. *Neusementius* calls this his Solar Red Oyl or Butter of *Antimony*, but I call it my Mercurial Antimonial Aurifick Water, which name doth properly belong to it, which I thus prove. Take of this distilled Golden Mercurial Water, of Leaves of Gold and Silver, each equal parts, put them together in a fixing Glass, and set it in a Sand Cuppel, which is heated equally by a dull *Harry*, and kept in the same degree of Fire, and the Mercurial Water will dissolve the Gold and Silver, and they will turn together into a Stone. The Spirits of Salts after they have dissolved the Gold and Silver, together with the Mercury of *Antimony*, will separate themselves by degrees from the *Mercury*, because they are not of the same matter, therefore they cannot become a Tincture with the Gold, Silver, and *Mercury*, which *Pontanus* very well hints. This separation of the Salt Spirit from the Tincture requires its time, and will not be hastened. *N. B.* But if you know how to separate the superfluity of the Spirit of Salt from the Golden Butter, by a subtile Art, and then dissolve your Gold and Silver in it, you will gain a great deal of time in your fixation, for the superfluous moisture

very much hinders, which the Ancients have hinted under a Fable, as the Learned *Bracesous* sufficiently admonisheth in his Treatise *de Ligno Vitæ*. This Salt Water is called by the Poets *Minerva*, concerning this you may read the Philosophers, and chiefly *Bracesous*, what he saith *Minerva* was, and you will find which way it must be separated from the Tincture. *N. B.* Be not in doubt, because *Bracesous* teacheth how to prepare his Tincture, not of Gold and Silver, but of *Mars*, for it may as well be made of *Mars*, only that is not so extensive as the Tincture made of Gold, otherwise the labour is the same, and differs not at all. I repeat this once more, that if you will shorten your labour, you must send away *Minerva* in peace, because she hinders the fixation. Some perhaps may wonder, what the Silver can contribute to this Tincture, because it is white, and hath no colour: I answer, that the inward parts of Silver are not white but red, and therefore may become a Tincture. After the same manner *Saturn* is not red outwardly, and yet with *Mars* becomes a red Tincture, as Silver doth with Gold. This I thought fit to say here concerning the Secret Fire of *Artephius*: If you will know more of it read *Artephius*, *Pontanus*, *Paracelsus*, *Bracescus*, *Neusementius*, *Cosmopolita*, and others, who have made mention of it, and you will there find larger Instructions.

Now as it is possible to transmute not only Gold and Silver, but also the other inferior Metals into Tinctures, by the *Proprium Agens* of Metals, so you may also fix into Gold and Silver, the inferior Metals particularly, with an incredible profit, for the inferior Metals may be put in in great quantity, with a cheap Agent, and so be maturated into Gold and Silver, which hitherto hath been known to very few in the World, but I do not doubt but hereafter it will be

better known, by which many honest Men will be delivered from Slavery. For as you have already heard, the *Proprium Agens* of the inferior Metals is cheap, so that the imperfect Metals may be with small costs, by the addition of their Natural *Proprium Agens*, which was driven away in their melting, by the help of External Fire, maturated into the perfection of Gold and Silver. *N. B.* If you can have Metals yet in their Oar, that have not been in the Fire, and add to each of them their *Proprium Agens*, and put them in close Vessels into a fixing Furnace, and maturate them with a requisite heat, then the fixation will the sooner be done, than with those Metals which have been already melted; yet those Oars must be well washed and separated from their Mine-Earth, before you put them with their *Proprium Agens* to be fixed. *N. B.* This fixation of the unripe Metals into Silver and Gold, as also of Gold and Silver into a Tincture, by their *Proprium Agens*, may also be done by the humid way, if you dissolve your Metals in their proper Menstruums, and then digest them for a sufficient time. *N. B.* For such a moist digestion or fixation Vegetables are more fit than Minerals, and Animals fitter than both, yet all of them be made use of to fix both the common, and Metallick *Mercuries*, as well universally into Tinctures, as particularly into Gold and Silver. But for the course Metals and their Oars, the universal Agent, *viz. Sulphur*, *Arsnick*, with their Compeers, as Cobolt and Orpiment are the fittest. Gold and Silver have also their peculiar Agents, by which they are maturated into Tinctures, of which the Animal Agent is found to be the best, for it is of this nature, that it turns the inward hidden colours of Gold and Silver outwards, and renders them visible, which no other universal subject can do like it. For if you cannot

bring outwards the inward colour of Gold and Silver, it is impossible to make Tinctures of them. For Gold and Silver, as nature hath produced them in the Earth, have no abounding colour to tinge other Metals withall, but no more than is required for their own perfection; but when they are exalted in their Colours by Art, they are able plentifully to communicate their Colours to other Metals, but else not. Now what kind of Animal Agent this is, by which the Exaltation of Colours may be made, I dare not make common; he that will know more of it, must enquire of *Adam*, who brought such an Essence with him out of Paradise. You may also read my *fifth Century together with the Explication*, where this Subject is treated of. Now as the *Proprium Agens* of the Metals, which is their Spirits, *viz. Sulphur*, *Arsnick*, *Cobolt*, *Orpiment*, and the like Metallick Spirits, are fixed with the Metalline Bodies, and with them become fixed Metals, because they are half Metals already, so on the contrary, Salts which also are good Agents to Maturate Metals, yet become not Metals themselves, as *Sulphur*, *Arsnick*, *Antimony*, *Orpiment*, *Cobolt*, *Zinck*, *Bismuth*, *Lapis Calaminaris*, and other Realgars or Metallick Spirits; for Salts do not participate of a Metallick Nature, therefore they cannot become Metals; but when they touch, dissolve, volatilise, and again fix Metals, it is only done by their Acidity, which is a kind of that Acidity which is naturally in Metals, and this is to be understood of Common Mineral Salts, as Common Salt, Salt Gem, Salnitre, Allome, Vitriol, and the like, which naturally grow in the Earth, in Stones, in Rivers, and also out of the Earth, which are dug out by Men and purified, and so imploy'd for several uses. These Salts have a great affinity with the Metals, but cannot become Metals. But the Vegetable

and Animal Salts are of another nature and property, they associate themselves with Metals, because they somewhat participate, though but little, of the Metallick nature. The Animal Salts are principally Volatile, and make a good *Sal Armoniack*, which hath a great affinity with the Metals, as I have in my Writings sufficiently shewn. The Salts of Vegetables are altered in the Fire, and become fixt Alcalies, which are also of good use to Metals, as you may see in my Writings. But the Volatile Salt of Animals far exceeds all other Salts, in its virtue; for it makes not only all Metals, how fixed soever they are, wholly volatile, and separates the cleanest Tincture of Metals, Minerals, Precious and ignoble Stones, that is, it separates their immortal Anima from their gross and unprofitable Bodies, with which you may perform incredible things, both in Physick and Alchymy; But this wonderful Salt also makes the most subtile, as well good as bad Spirits, incredible quick, surmounting Human Understanding, visible, tangible, Corporeal and fixt, which concentrated and fixed Spirits, have ingress and egress through Doors lockt up, by which strange and incredible things may be done. So great a power hath the Almighty bestowed upon the Animal (chiefly the Microcosmical Salt) above all other Salts, which is known to few. For the Microcosmical Salt, and for want of that, the Volatile Salt of other Animals, Birds, Fishes, as also of Herbs and Woods have power to volatilise all fixed things, and again to fix the volatile. In which volatilising, the purer parts are separated from the grosser, the which being fixt again, you have a Tincture, and there is no nearer, easier, or cheaper way in the World to attain to true Metallick Tinctures, than by the means of Volatilising Salts. Take a similitude from the Spirit of Corn or

Wine, so long as it is yet in the *fæces* of the Corn or Wine, it is little esteemed, but when it is driven out by Distillation, and cleansed by Rectification, and so exalted in its Virtue, then it is Esteemed, because much good may be done with it. So and no otherwise you must esteem of Metals, in which such rare Tinctures are hidden, which then are not esteemed, because few know what great things may be effected by them. The like great treasures are also hidden in great quantities, which by the Ignorant are not esteemed or sought after, notwithstanding that the Ancient Philosophers have highly recommended to us the Extractions, Distillations and Separations of the noblest Tinctures to be drawn out of gross despised Metals and Stones, yet their profitable Doctrines and Admonitions have taken with very few.

Basil Valentine confesseth in his Manuals, that the Work of the Philosophers can be compared to nothing better than to the known labour of making Spirit of Wine, which preparation is known even to Rusticks. The distillation and separation of the Tincture of Philosophers is as easie as to make Brandy, and yet it is done but by very few.

Paracelsus in his *Cœlum Philosophorum*, speaking of the Spirits of Metals, saith plainly, that it is so easie to make Gold and Silver, that it is not worth while to write of it. *Virgil* also sheweth, how easie a thing it is to pluck the Golden branches from the Opake Tree of *Vitriol*, and how easily they will follow one another, if you but hold forth your Hand, and when you have cropt one, be bids you also take a second. What could be said plainer? But yet I tell you, that these Golden Branches are much more easily, and in greater quantity to be obtained out of the Red Earth

or Stones, than out of Metals; but he that will not believe it, may remain in the dark. It is enough for me, that I have plainly declar'd the truth to the ungrateful World, without any reservation. But our *Sal Armoniack* (I do not mean the Common) is a good *Proserpina*, which easily carries over the Tincture of Stones and Minerals. And he that will pluck these Golden Apple bearing Branches with profit, must very well consider after what manner to prepare his *Proserpina*, that she may touch and carry over only the cleanest Tinctures, and leave the gross Bodies behind. The Artist must also be sufficiently experienced, how to separate *Proserpina* or *Minerva* from the Extracted Tincture, for *Minerva* is a hinderance to the fixation of the Tincture. And this is the principal secret in this Mystery. For all Tinctures of Metals and Stones, after they are separated from their gross Bodies, by our *Proserpina*, they are volatile, and so remain till they are separated from our *Proserpina*. Although *Proserpina* is a two-fold Key, which both opens and shuts, makes volatile and fixed, yet this is to be observed, that there are but very few who know how to use this Volatilising and fixing Salt; and therefore I advise to separate it from your Tincture, and then fix your Tincture. But if God shall so favour you, as to shew you how to fix this *Proserpina*, or, to speak plainer, our secret *Sal Armoniack*, with this Tincture which it hath drawn out of Metals and Stones, both together without any separation into a fusile, red, penetrating, and tinging Stone, then you may for that bless God all your life, for you may have always plenty, without any want, for there is no richer particular, nor universal Tincture in the World.

For what can be a greater Art than by the help of our *Sal Armoniack*, in a few hours, to draw a pure

Tincture out of gross Metals and Stones, to bring it over by Distillation, to purifie it to the highest by Rectifications, and then again to render those Volatile Tinctures in a few hours, fixt and constant in the Fire, so that by them you may immediately tinge the inferior Metals, particularly into good Gold? I *Glauber* truly say this, that this highly profitable Labour, to draw the Tinctures out of Metals and Stones, by the help of our *Sal Armoniack*, to exalt them, and again to fix them, requires hardly twenty four hours time from the beginning to the end. Which to the unskilful will seem incredible, but whether it be believ'd or no, is all one to me. It is the Will of God, that his great Gifts shall not come among the impious, but only remain among those, whom he esteems worthy of those high Secrets, and them who also will make good use of them. *Virgil* at first gave but a hint of it in few Words. Afterwards *Cosmopolita* did explain this great Work at length. Then *Neusementius* published it yet plainer, but the Work is most clearly and largely described in all its Circumstances, by the pious *Brasescus*, in his *Dialogue de Ligno Vitæ*, but it is received by very few, because the proud *Toletanus* despised this cheap Martial Labour, as if *Mars* contained no good at all, but that it was only to be found in Gold and Silver. I ingeniously confess, that I am acquainted with several good Secrets, by which one may reap Profit out of Metals, yet none of them is cheaper and easier, than the Work of *Virgil* upon *Vitriol*, or the *Opake* Tree, to break off the Golden Branches one after another, by the help of his *Proserpina*, or *Eagles* Wings, or *Griffins* Claws. But if one would reap good Profit by this Labour, he must be furnished with a good quantity of *Griffins* Claws and *Eagles* Wings, which also is easie to be had in great quantity, for I

have sufficiently taught how to prepare them. Further, it is needful to know, after we have drawn the Tinctures, out of Red Metals and Stones, by our *Alcahest*, how to perfect them, because they are yet Volatile, no Metal can be meliorated by them, therefore they must be fixed before they can be used. This Fixation may be made in the space of six hours, so that these Tinctures retain their ingress and fusibility, so that if they are put upon a red hot Plate, they melt in a moment, enter and tinge as readily, as Oyl doth dry Leather; which all Tinctures do not, but must be brought to it by Art, but our Tincture only which is made by Volatile Spirits, doth it: The reason is this, all gross and fixed Bodies are naturally influxile, on the contrary, all Volatile Spirits again Coagulated into fixed Bodies, must of necessity be fluxible and penetrating. Observe this well, for it is plainly enough spoken. Concerning this, see the *Epistle of Arnoldus* to the Pope, and there you will find this Observation. Without this Secret *Sal Armoniack*, no good can be done in *Alchymy*. Thus I end my Explication of the Secret Fire, by which all Metals particularly and Universally, are maturated, with incredible Profit, to the perfection of Gold and Silver. Now it remains to give some hint, how these Secret Fires or Agents, separately by each *Proprium Agens*, may be after a peculiar manner, maturated into Tinctures. You have heard that common *Sulphur* is the *Proprium Agens* of *Saturn*, which becomes fixed with the Lead, and in this Fixation it also fixeth and tingeth its Patient the Lead, into ☉ and ☽. You have also heard, that *Arsenick* or *Cobolt* is the *Proprium Agens* of Tin, and that *Arsenick* the Agent is easily fixed by its Patient, Tin, and with the Tin becomes ☉ and ☽. And also, that the common ☿ is fixed into good Silver, with Lead. And all Volatile *Realgars*, as

Orpiment and its Compeers, may be fixed into good Gold with ♂ and ♀, which is the naked Truth, of which I would have none to doubt, for I my self have several times performed these cheap Fixations, and because I am sufficiently satisfied in it, I dare satisfie others.

I have thought it unnecessary to describe, at large, all the Manuals which belong to this cheap Fixation of the inferior Metals, and also to the Coagulation of the Volatile mineral Spirits, into constant Gold and Silver. I have therefore published it as short (yet comprehensive enough) as I could, that you may speculate into it your selves, and then you cannot fail, except God prohibit you, which often happens to evil Men, which see easie things done before their Eyes, which yet they cannot imitate. Now to put an end to this business, and to prove that the Universal Agent, the common *Sulphur*, which is the Grandfather or *Demogorgon* of all Minerals and Metals, hath also its *Proprium Agens*, by which it may be maturated into a Universal Medicine or Tincture, I have thought fit to acquaint the World with this easie and cheap Fixation of *Sulphur*; chiefly, because I have already, some years since, treated of this easie Fixation of *Sulphur*, but I have not there discovered every thing so plainly, that every one may prepare it. But now I intend, God willing, to publish it so clear and comprehensive, that even any *Mechanick* may not only understand, but easily imitate it. I pray God to assist me in it, *Amen*. Some years ago I taught, how, by the help of my *Sal Mirabile*, to fix any common *Sulphur*, but chiefly, such as is yet bound up in Wood or Sea-Coals, and doth not so easily fly in the Fire, but is easier to be handled with a red hot heat, than the open Fluxile common *Sulphur*. This curious Work I have shewed to some Friends with

my own hands, and highly recommended it to them, to take it in hand, and bring it to a good end, because I was certain, that it must become a rich, and far extending Tincture. But seeing the *Sulphur* would not presently be fixed, they left the Work: Whereupon I farther divulged this Work by writing, and made it common. Notwithstanding which, as yet very little hath been attempted about it, because every one is in haste, and hath not Patience to wait for a good end, not considering that every thing must have its time, and that haste makes waste. Must not the Plowman, when he sows his Corn into the Earth, to have an hundred fold encrease, wait the due time before he can have this Multiplication? Why should not then also a *Chymist* wait his time, for this profitable Fixation, that will recompense him a thousand fold? Now to return again to our business, to shew that any common Combustible *Sulphur*, which otherwise is an universal Agent for all Metals, to maturate them into Gold and Silver, hath also its own *Proprium Agens*, by which it is not only maturated into ☉ and ☽, but also into a true universal Tincture; and this is done only by certain *Salts*, that have Power to fix the *Sulphur*, and make it constant in the Fire. *Cosmopolita* minds us of this very well, when he saith, that Salt, in the conflict with *Sulphur*, gave him a deadly Wound, which is very true, and besides Salt or strong Spirit of *Salt* hath Power to fix it, if they be several times drawn off from it. How this is to be done, I have taught in my *Three Principles of Metals*. But such a *Sulphur* as is fixed by *Aqua Fortis*, is also quite killed, and its ingress into Metals is taken away, but may be restored to it again, so that it easily enters Metals, and tingeth them throughly. *Paracelsus* saith, you must reverberate the fixed ♄, till it comes to be Red,

and then draw out the Tincture, with Spirit of Wine, and then fix ☽ or ☿ with it into Gold. *Neusementius* teacheth to drown the Dragon in the *Stygian* Waters, that is to fix him, and when he is come to the highest degree of fixity, that then you must revive, or Volatize him again, and then fix him the second time, and then he hath a better ingress into Metals to tinge them. *Bracescus* teacheth also, to extract his fixed *Sulphur*, out of the fixed Scales of Iron, and to fix them into a Fluxile and penetrating Tincture. *Cosmopolita* teacheth it after this manner, *viz.* how to deliver *Sulphur* out of his Prison, and that he will give to his Redeemer a Crown of Three Kingdoms for a Recompence. Out of these, the true Fixation of *Sulphur* is sufficiently to be learned, and needs no farther instruction, but yet I cannot forbear here to set down my way, how to fix it, that the Artist may so much the easier attain his End. And this Fixation of *Sulphur* may be done after several manners.

And First in this: I have taught, how *Sulphur* may be fixed into a Red Carbuncle, persisting in the Fire, where I have treated of my *Sal Mirabilis*: It is true, this way of fixing is done without any cost, yet it requires a certain, tho no very long, time, which is the reason, that hitherto few have tryed any thing in it, and yet it is very difficult to come easier and cheaper to the Fixation of *Sulphur*; and besides, there is this advantage in fixing the *Sulphur* with the *Sal Mirabile*, that it retains its easie Flux and Ingress into Metals, which that fixed by *Aqua Fortis* doth not, but into an unmeltable Earth, which hath no ingress into Metals except it be procured by Art, which every one cannot do. Yet *Neusementius* hath clearly described it in these Words: When thou hast brought thy Subject to its highest Fixation, to wit, by the Abstraction of *Aqua Fortis*, (which Fixation he also clearly teacheth,

when he saith, that you must drown the Dragon in the *Stygian* Waters, and so make him fixed) and after the Fixation make him Volatile again, that then he acquires his ingress, and is fit to tinge, which is so plainly exprest, that it is impossible to express it plainer, yet these excellent Writings, are written only supervacaneously, and understood and imitated but by few. I still add even to superfluity, one way more how to fix any *Sulphur* whatsoever, to do wonders in Physick. ℞. Sea-Coals, or in defect of them, Wood Coals powdered, good *Saltpeter*, Common Salt, and Oyl of *Vitriol*, of each a like quantity, put these four things into a Glass Retort well coated, fix a Receiver to it, and in an open Fire distil off all the Humidity, urge it at length with the strongest Fire, and a Green Liquor of *Sulphur* will come over, which the Ancients called the Green Lyon, which dissolves ☉, and when they are digested a good while, or the Green Liquor is often abstracted from the ☉, then they are fixed together, and the Liquor of *Sulphur*, together with the ☉, turns into a Red tinging Stone. *N. B.* If you will that the *Sulphur* shall not come over, but remain fixed behind, you may instead of the common Salt, which makes the *Sulphur* Volatile, put *Saltpetre*, which is of this Nature, as well as Oyl of *Vitriol*, to make any *Sulphur* fixed, but common Salt makes it Volatile. *Jason* killed or fixed the always watching Dragon with a strong Water of *Saltpetre*. *Bracescus*, *Basilius*, *Paracelsus*, *Neusementius* and others have done the like, he that will truly follow them; cannot err, but it is impossible to explain to the ignorant any thing, so that he may presently imitate it. You must yourself take the thing in hand, and proceed diligently, else nothing can be done: Let this suffice to be said concerning common *Sulphur*, which is an Universal Agent, to maturate all Metals, and it self is

fixed with Metals, into ☉ and ☽; and also by *Saltpetre* and *Vitriol* is fixed into a true Tincture, as is here demonstrated. Here I put an end to the Explanation of the Agent, and Patient of Metals, how to fix them particularly into Gold and Silver, and Universally into Tinctures. It yet remains to give a small Explication of the Fixation of *Sulphur*.

A RECAPITULATION

Reader,

I have taught in this Book, what the *Proprium Agens* of Metals is, by which they are naturally maturated in the Earth, *viz.* That the *Demogorgon* or *Sulphur*, is not only the Father of all Metals, but also their Universal Agent, or Maturating Fire, by which all the Metals naturally in the Earth, and by Art out of the Earth are brought to perfection, and that also besides *Sulphur*, as the Universal Agent, the Metals have their particular, or proper Agents, which help to bring the Metals to perfection, as well as the Universal Agent. I have also taught, that the Volatile Spirits of Metals, or their proper Agents, do not only maturate their Metals, but also become good Bodies themselves with the Metals. I have also taught, how *Sulphur*, as a Universal Agent chiefly by Salts, may be maturated into a Tincture, which Fixation by Salts, must have its due time, before you can make it constantly fixed in the Fire, which length of time hath made many Artists forsake the Work, altho' he knew, that of necessity it must come to a good Tincture. Impatience causeth this, that they cannot wait the true time of the Harvest. Wherefore impatient Men should not meddle with *Alchymy*, but rather think a Bottle of Wine, which is sooner done than a

Combustible Fugitive *Sulphur* can be fixed. The learned Ancients have taught us, that Patience is the Root of all Sciences and Arts, wherefore then are Fools so hasty in their Undertakings? When all Philosophers Unanimously testifie, that all Festination proceeds from the Devil. *Paracelsus* hath taught how to fix *Sulphur*, by the help of a strong *Aqua Fortis*, by abstracting it from it four or five times. But I have taught, how to fix it by the abstracting of a strong *Aqua Fortis*, but once, in my Book *of the Three Principles*: 'Tis true, by this way it loseth its Fluxibility and Ingress, but this may be restored to it again, which for certain Reasons, I did not think fit to make known. Now being we know, that nothing fixeth but *Sulphur*, and that a Combustible *Sulphur* spoils the Metals, and makes them Black, and a fixed one hath no Ingress, but when that is given to it, it is fit to tinge the Metals, for whatever tingeth the Metals constantly, must it self be fixed, or else it would not endure the Cupel. 'Tis true, out of *Mars* and *Venus*, you may easily extract a Tincture, which yet doth not tinge constantly, except they be first truly fixed. Very many have thought, that if they could but incorporate a *Crocus Martis* with Silver, that of necessity it must become Gold, but they found themselves to be mistaken, for if *Crocus Martis* should be put upon Silver, it doth not tinge it at all, but again becomes Iron, and makes the Silver brittle. *N. B.* But if you know how to prepare a Red *Sulphur* of Iron, constant upon the *Cupel*, without returning to Iron again, and then draw out of this Red fixed *Sulphur*, its purest Anima or Tincture, you have a Colour to tinge all the Metals in the World. This is the Reason, that the Old Philosophers have so often inculcated, to destroy the Gold: So that it cannot be

reduced into Gold again, and that then you would have the greatest of Secrets. But I could do nothing more with such a destroyed Gold, till I learned to give it ingress, for when it is destroyed it enters no Metal, but if you give it ingress, then it tingeth, so also neither *Mars*, nor common *Sulphur* can tinge, if they have no ingress which you may easily believe.

Therefore the whole Art to make Tinctures consists, first in making of the red Metals as Gold, Iron, and Copper, irreducible, then to extract their Tincture, and to give an Ingress. This labour is a very easie thing to the knowing, but incredible to the unskilful; for I have some years since, shewn to some Friends out of kindness the destruction and fixation of such Metals, together with the Extraction and Ingress, very plainly, and highly recommended to them this universal work; they have performed the fixation, but the Extraction and Inceration they have not done, although it is so easie that a Child of Ten years old may easily perform it. My hopes were, that when they had perfected it, they should give me some of the Tincture, but in stead of a recompence, they told me they could not do it, which was because God kept his hand over it. After the way that is here shewn, Tinctures may be easiest prepared out of red Sulphureous Metals and Stones, and I have a small quantity of it by me, which will tinge red, I made it before my Sickness, and keep it as a memorial to my Posterity. Some perhaps may ask, whether there be not a nearer way to prepare Tinctures for Metals, than by Extractions and Fixations, which require much time and Costs. I answer, 'tis certain there are nearer ways to fix *Sulphurs* in their whole substance without loss of weight, without any addition of Salts or Spirits of Salts, very easie and cheap, *viz.* by the Universal Coagulator into a Tincture, and by their

particular Coagulators into Gold and Silver. Concerning the Coagulators I have already made them known, *viz.* that Lead is the Coagulator of Common *Sulphur*, and Vulgar *Mercury*, Tin is the Coagulator of *Arsnick*, and *Cobalt*, Iron and Copper are the Coagulators of *Orpiment*, *Sandarach*, and all other Realgars, and that Gold and Silver are the Coagulators of the *Mercury* of *Antimony* into a Tincture. Now concerning the Universal Coagulator, 'tis not a Malleable or fusible Metal, but only an immature Volatile Mineral, not much unlike to Lead Oar, and therefore the Philosophers have called it the *Saturnine Magnesia*, and this is not all one and the same, for it is found in different colours and figures, so that he who will use them must well understand their difference, that he may not take the wrong for his work, and so lose his labour. The Ancients have not revealed this Volatile Mineral, but kept it as a Universal Coagulator in the greatest secrecy, and that not without reason, because they maturated their Volatile Metallick Spirits and Tinctures by it. Yet the Volatile Tinctures may also be fixed, without this Universal Coagulator, but that requires much time; therefore they have used this Coagulator for an help, and so they could maturate the most Volatile Metallick Spirits into fixed Tinctures, in a short time, and this Compendium is the chiefest thing in the Chymical Art, see the Treatise of the *Three Principles of Metals*. Now to return again to *Sulphur*, and to demonstrate; that it may be easily made fixed in the Fire, which is thus: Take one part of Common *Sulphur*, mix it with three or four parts of Lead Ashes, put this mixture into a strong Earthen Cementing Box, lute it well with a good strong Lute that will not crack, when the Lute is dry, put it into a Cementing Furnace, or into such a Fire, that in the beginning

will only melt the *Sulphur*, so that it may penetrate the Lead Ashes, and hide it self in them, and so be initiated to the Fire, then by degrees increase your Fire from day to day, till at length the Crucible become to be of a dark brown, then increase your Fire still more, and continue this so long till the *Sulphur* becomes quite fixed with the Lead Ashes, and constant in the Fire; and this will require eight or ten months time, during which time the *Sulphur* becometh fixed, and hath tinged and fixed its Body, the Lead as much as it could, for it is not possible for it to fix all the Lead after this manner into Gold and Silver, but only part of it, yet so that an hundred-fold profit is made of it, if you proceed rightly in the matter. The reason of the melioration of the Lead is this: If *Saturn* hath power to make a Combustible *Sulphur*, incombustible and fixed in the Fire, so that it neither fumes nor burns, then it is certainly as good and fit for tinging as another *Sulphur*, which is made fixed by much labour of abstracting *Aqua Fortis* from it. In this Fixation the *Sulphur* retains its Ingress, and therefore needs not to be given to it afterwards, for it had an Ingress when it was not fixed, and when it is made fixed it still retains it. This makes good that common saying of the Philosophers: If *Sulphur* shall first penetrate *Saturn*, and *Saturn* attracts it willingly by reason of its great dryness, and unites it self with it, then it is said that *Nature rejoyceth in Nature*. When it can be made red-hot with the Lead, then it is said, *Nature overcometh Nature*, but when the fixed *Sulphur* remains constant with the Lead upon the *Cupel*, then it is said, *Nature retains Nature*. This which I here declare so plainly, all Philosophers before me have kept very secret, but that I here reveal such great secrets, I have a reason for it, which is not necessary for every one to know.

Now as we have here taught the fixation of *Sulphur* by Lead, after the same manner the fixation of *Arsnick* is to be done by Tin, which becomes fixed with it in the Fire, to the great profit of the Artist, it recompenseth him with Gold and Silver upon the *Cupel*; and this Work the Philosophers always kept very secret. *Cosmopolita* writes, that there is a small Fish in the Sea named *Remora*, which hath such power, that if it fits upon the Stern of the Ship, it causeth it to stand still, so that although the Wind fills the Sails, yet it cannot move. In another place, he calls this Fish *Echineis*, which if you read backwards, sounds Tin Ashes. Other Philosophers also write of this work of Fixing, that there are always two sorts of Birds in the Nest, or two sorts of Dragons in the Den, that one of them would willingly stay, which is the Body, but the other which hath Wings, would always fly away, yet at length it is by degrees so overcome by that which hath no Wings, that at last it endeavours no longer to fly. The same happens here to our Volatile *Arsnick*, that is, with the fixed Tin Ashes, the Volatile part *Arsnick* is always striving to fly away, but the Tin Ashes binds and keeps it, that it is forced to stay against its will, and also become fixed with its Companion. Now as we have here proceeded with *Arsnick* and *Tin*, and with *Sulphur* and *Lead*, after the same manner must be done with *Orpiment*, and *Mars* or *Venus*, but with *Sulphur* and the *Mercury* of *Antimony*, together with Gold and Silver, the fixation is performed after a peculiar manner, which fixation I have already declared, and therefore need not repeat it. This I would have noted concerning the Agents and Patients of Metals, but I am very well assured, although this fixation is very mean and easie in it self, that yet it will not easily be imitated, and that

because I have made known so great a Secret in so simple and mean a Style. The World is full of Pride, and cannot give credit to such mean things, but rather looketh after high, tedious, and sophisticate things, which are worth nothing, if they are but set off with fine words; God will have it so, that these great Secrets may not fall into the hands of the Impious. Here, in the fixation of the Common *Sulphur* with Lead, and *Arsnick* with *Jupiter*, *Orpiment* with *Mars* and *Venus*, I have spoken openly, and hid nothing, yet I am certain it will not be taken in hand, partly because of the length of time required in the fixation, which will deter many from this work, many who shall read it will not be able to believe, that so easie a fixation hath been done, because none hath hitherto written of the like cheap way of Meliorating Metals, nor spoke so plainly as I have done. Many will take Exceptions at my Person, and say, if it was true what *Glauber* writes of the easie fixation of the inferior Metals, to transmute them into Gold and Silver, he would do it himself, and thereby make himself rich, and not publish things of so great a concern. To this I answer, that my great Age, and many weaknesses will not permit me to take such things in hand, by which nothing but Worldly Riches are acquired, which sometimes do Men more harm than good, which I never did nor ever will seek after. If others will do it, they may. I trouble not my self about the Mammon, but prepare my self for a happy passage into a more peaceable Life, where there is no strife nor misery, but everlasting Peace, and everlasting Light reigns perpetually. But in that I have discovered these great Secrets, by which those who seek after them, may become very rich, I have done it out of a good meaning, *viz.* that if many by this shall attain good

means, that some of them at least may assist the poor out of their abundance. To this end only have I discovered these Lucriferous Secrets, and not at all to please the Proud and Covetous. But yet although I have described all plainly without any reserve of the Manuals thereunto belonging, I am very well satisfied, that God will keep his hand over it, and will not indifferently give his Blessing to all in it, but will so dispose it, that his gifts may not be misused. And therefore I am very well satisfied, that Art will remain Art, although it be never so clearly laid down before the Eyes of all Men. To whom God will give it, him I envy not, but wish him Gods Blessing with it, and earnestly exhort him, that when God hath blessed him, that he by no means forget the Poor. *Amen.*

A TREATISE CONCERNING The Animal-Stone: OR,

Of that Animal Matter or Subject which God ingrafted into Adam *and* Eve*, as a Divine Portion or Patrimony in Paradise, and which he still retained after his Fall and Banishment out of Paradise, brought it with him thence, and after Death took it along with him to his Grave, or to the Earth from whence he was taken and made; What kind of Matter properly it is, and in what manner a true Universal Medicin may be made of it. Faithfully Translated out of the* High-Dutch.

The PREFACE.

Curteous READER,

Having in some of my last Published Writings, and especially in my Fifth Century, treated of a certain

Matter, called by the Ancient and Modern Philosophers, The Philosophers Stone*, which Matter they say, God implanted in the first Man* Adam*, and which after his Fall and Banishment, he brought with him out of Paradise, and after his Death, took it along with him to his Grave, without revealing this Divine Patrimony and Portion to any of his Posterity; so that this great Treasure continued for some time hidden from the wicked World, until at length it pleased God to open the Eyes of some honest Men to know and discern this great Gift of God, which they also made known to others, though this communication of theirs was of little use to proud Worldlings, whose Eyes are only fixed upon outward Visibles, not minding the inward Invisibles. Wherefore none of them could believe, that so great a Treasure was hid in Sinful Man, as accounting nothing worthy their esteem, but Gold, Silver, and Precious Stones, and casting out upon the Dunghill as loathsom and contemptible what is far better than Gold or Silver.*

And because some of my Enemies have slandered some of my Writings, as if they contained absurd and impossible things; to the end that none by their Lies and Slanders may be led aside from the way of truth, I am resolved to set the Truths I have written in a greater Light, and palpably to evidence before the whole World, that what I have taught, viz. *that a Mineral Aurifying Virtue lies hid in Vegetables and Animals as well as in Metals, is no absurdity, but a great truth, to the shame and confusion of my envious Adversaries.*

O thou Eternal Light, without the least mixture of darkness, Creator and Governor of Heaven and Earth, send down upon me thy holy Spirit, beam into my Soul a Ray of thy Heavenly Light, that it may enlighten my Heart, Brain, and Understanding, that I may write nothing but what may serve to thy Glory, the salvation

of my Soul, and the enlightning of many thousands that wander in the darkness of Error. Amen.

OF THE
ANIMAL-STONE.

In the Name of the most Holy Trinity, I undertake to communicate and declare to the dark wicked World, the great Wonder-works of God, and Mysteries of Nature, and that with so much clearness and evidence as never hitherto hath been done by any; so as not only the good, and such as are taught of God, but also the perverse Worldly Learned, or the most ignorant Rustick may comprehend, understand, and even handle with their Hands, that I have fundamentally declared and manifested the Mysteries of God and Nature, to the glory of God, and good of Mankind.

In order to perform the great Work I have undertaken, it is needful that we know first, what the thing is, we are to seek, and next, where we are to seek for it. The thing we seek for, is the Philosophers Stone, which affords the Possessor thereof health of Body, and an honest plentiful Maintenance. Now forasmuch as most of the Ancient and Modern Philosophers, a few only excepted, point us to Metals, and especially to fixt *Sol* and *Luna*, thence to procure for our selves this great Treasure, though they handle this matter with so much obscurity, that amongst an hundred thousand Seekers, scarcely one is found that attains to his desired End, most of them besides spending their Goods and Estates in the fruitless pursuit of this hid Treasure; whereof those in a great measure are guilty who persuade Men that *Sol* is the Subject of the Philosophers, and that all

other matters are improper and unfit for their Work; But others again inform us, that this great Treasure may be obtained a nearer, easier, and cheaper way, without *Sol* or any other costly Subjects; Concerning which cheap, and every where to be found, Subjects, I have made mention in some of my late published Writings, and particularly in my Fifth Century, yet not so plainly as wholly to expose these Pearls to swine, for them to tread them under their Feet. And forasmuch as several ignorant and envious Persons have taken occasion to appear and contradict these my Writings, as if it were impossible to find Mineral Virtues in Vegetables or Animals, I am moved to stop the Mouths of these envious and ignorant Back biters, and to expose them to the Publick shame of the World. I confess I do not think these Slanderers worthy that I should take any pains to confute or convince them of their Error, because I am not to mind what such as they, but what honest Men, and what truth it self, speaks. But because this demonstration may be of use to undeceive and inform many Seekers after this Treasure, I suppose I shall do a good work, in giving this evident testimony to Truth, whereby not only the Mouths of Slanderers may be stopp'd, but the Eyes of the Deceived may be opened to discern the Truth.

We proceed then to hear the Verdict of Truth in this Matter, whether indeed such a Mineral Virtue be hid in Vegetables and Animals, as that the Philosophers Stone may be prepared of them. And first we will speak of Man, as being the Noblest of all Gods Creatures, and then proceed to the four-footed Beasts of the Earth, the Fowls of the Air, Fishes in the Sea, and all Creeping Things, and last of all to Trees, Plants and Herbs, to see what the Almighty Power of God hath laid up and hid in these for the

use and welfare of Mankind.

As to Man, the most Excellent part of Gods Creation, whom God made a Ruler and Governor over all his Creatures in Paradise, we know that he was made very good, without the want of any thing that might conduce to his happiness or perfection, which goodness continued in him after his Fall, though much clouded and veiled. Forasmuch then as God hath been pleased to lay up in Man this great Treasure, to the end he might make use of it for his good and perfection, we must conclude, that the Divine Wisdom hath placed it so, that Man may always have recourse to it, and take thereof, (without any hurt to his Body) to the glory of God, and his own good. For had God placed this Treasure in the Flesh or Blood of Man, he would have been obliged to hurt and weaken his Body by cutting a piece of his own Flesh, or letting out his Blood, in order to prepare this great Medicin, which by this means would prove too dear, so that most Seekers would rather want the Medicin, than attain it this way. But God, who is the Eternal Wisdom it self, hath not been guilty of any such oversight in his Works, which are all perfect, and no fault to be found with them; and if Nature in any of her productions prove defective, that is not to be attributed to God, but to Satan, who whilst Man slept sowed the Tares amongst the good Seed, which the Master of the Houshold had sowed in his Field.

If it be so then, that God hath not laid up this great Treasure in the Flesh or Blood of Man, we may further enquire, where then we are to look for it? Certain it is, that God, our Heavenly and Wise Father, hath laid up this great Treasure in Man, where at all times, without any let, pains or trouble,

he may come at it, and have it for nothing, *viz.* in the Superfluities of Nature, as Urine, Dung, Hair, Sweat, and Spittle. I say that in these despicable Excrements and Superfluities of Nature, God hath laid up a great Portion for Man, which he by reason of his Pride, blindness and hardness of Heart, cannot see or perceive.

Another Question that may be here demanded, is, In which of these Excrements this Treasure is most copiously to be found? To which I answer, that it may be had from any of them, but in the one more plentifully than in the other, but which is the most fit and proper for this Work, I dare not plainly set down at present, for fear of exposing and prostituting this Pearl to the Wicked and Unworthy, which all honest Philosophers have so highly forbidden. But this I will do, *viz.* most clearly demonstrate, by many instances, that out of all the Natural Excrements and Superfluities, whether of four-footed Beasts, Fishes, Creeping Things and all Vegetables, a Mineral Aurifying Virtue, that is the Matter of the Philosophers Stone, may be had, and that without cost and charges in all parts of the World, so that no body, how mean so ever he be, but may have enough of the matter for nothing, and needs not by his Poverty be deterred from undertaking this great Work, that affords Health and Riches to him that can bring it to an happy end.

I proceed now to those Proofs and Experiments that evidently make out, that in all things (besides Metals) a Mineral Virtue and Power is found, whereby the Philosophers Stone may be prepared. I shall begin first with four-footed Beasts, because I do think it fitting for several weighty Reasons, at this time to pass by the Mysteries that lie hid in Man,

that they may not be exposed to the Wicked and Unworthy. Now these Excrements and Superfluities of four-footed Beasts as well as of Man are different, according to their diverse Passages and Places of Production, as Urine which makes its passage through the Bladder, Dung through the Guts, Sweat through the Pores of the Skin, Spittle through the Mouth, and the Hair or Wooll of Beasts, also through their Skin or Hide, and accordingly are of different Virtues and Powers. Upon this account we must conclude, that in the Sweat of Men or Beasts, there is not so great virtue as there is in Urine, the former being a suddain and almost instantaneous Generation, whereas the later requires some hours time before it can pass through its several Chanels, and be made fit for Natures separation. So likewise is Mans Dung a long while a passing through the Guts, which in Man and Beasts are much longer than in Birds or Fishes, to the end that the Dung might be the better putrified and digested; Thus we find by Experience, that the Dung of a Stork which passeth only through one short Gut, when it falls upon the Grass doth presently burn and scorch it, whereas the Dung of Men and Beasts laid to the Roots of Vegetables, or any way conveyed to the same, do strengthen and invigorate them, and are indeed the highest Medicin of Vegetables; as Country Farmers well know, who with the help of the Dung of Men and other Animals are used to cure their sick, barren, and overwrought Fields, Vineyards and Orchards, restoring them to their former strength and fertility. But though simple Rusticks be very well acquainted with the great virtue and use of Dung, yet our great Learned Men cannot believe, that in such a despicable Subject should be lodged such an Excellent Universal Medicin, capable to cure the

Diseases of Men and Metals; and the reason is, because they love Pride and Idleness too well, will not put their hands to the work, contenting themselves with what they know already, without searching into endless Secrets of Nature. For this cause it is, that true Medicin and Alchimy are advanced to no higher degree of Perfection. *Helmont* complains of this negligence in Physicians, who leave the preparation of their Medicins to Apothecaries, declaring, that every Physician who desires to have good and rightly prepared Medicine must be both Master and Servant, that is, he must trust the Preparing of his Remedies to none but himself.

The present Subject I am upon, *viz.* the Excrements of Men and Animals puts me in mind of a Story relating to *Paracelsus*, which take as follows.

A Relation of what happened at Vienna *between* Paracelsus *and some of the Imperial-Court Physicians.*

Paracelsus being on a time sent for by the Emperor to *Vienna*, to cure some Persons of high Quality, whom the Imperial Physicians could not help, having successfully performed the Cures he was sent for, went to take his Leave of the Physicians, who earnestly intreated him to leave some of his noble Medicaments with them for a remembrance; whereupon *Paracelsus* answer'd, that he would fetch something for them; The Physicians, supposing he intended to bestow some part of his prepared Medicins upon them, with impatience expected his return, who soon after came to them, and set down on the Table before them a Silver Dish cover'd with another Dish. The Physicians were very desirous to see what *Paracelsus* had brought for them; at last one

of them taking off the Cover, found a great Turd in the Dish, at which being exceedingly enraged, taking for granted that *Paracelsus* had done this to affront them, they all departed, and when some call'd them back, *Paracelsus* said, Let the Asses go, they do not deserve this great Secret, which I intended to communicate to them; And then added, He who doth not know what Mans Dung is, knows nothing, and Heaven and Earth are equally hid from him. With which words he sufficiently intimated, that a great virtue is hid in Mans Dung. Thus much shall suffice, by way of Parenthesis, to have spoken concerning *Paracelsus* his Opinion concerning the Superfluities of Nature, and particularly the Excrements of Man, we proceed now to speak of the Excrements of other Animals, and in particular of Sheeps Wooll.

An Experimental Demonstration, that a Mineral Virtue is hid in the Hair of Beasts.

℞. Of clean Sheeps Wooll iv Ounces, and pour upon it a like quantity of strong *Aqua Fortis*, abstract this *Aqua Fortis* wholly in Balneo, and the *Aqua Fortis* will dissolve the Wooll, and when abstracted, will leave behind a stinking Stone of a dark brown colour; afterwards dissolve in another Glass Body of *Mercury* j Ounce, and of the finest *Sol* iij Ounces, pour these Solutions of *Sol* and *Mercury* into the Glass wherein the dissolved Wool is, then abstract the Menstruum from the Metals, till nothing remain but a dry Stone in the bottom of the Glass, take this Stone and put it into a Glass Retort, and distill the *Mercury* from the *Sol* in a strong heat. *N. B.* The *Mercury* will not come over quick, but in the form of a Butter of *Mercury*, of great use for the healing of incurable Venereal Ulcers. If you pour some Water upon the said Butter, it will precipitate the *Mercury*

in form of a white Powder, which being edulcorated and dried, is a good Purge in Venereal Distempers. But if you rectifie this Butter, and then pour it upon a pure Calx of *Sol*, the Butter will dissolve the *Sol*, and being afterwards digested for some time, the *Mercury* by means of the Saline Spirits of the Wool will be fixed with the *Sol* into a Stone, with it make a trial upon Metals, to see what it can do, and thou wilt find thy Labour richly rewarded; but if thou canst not hit it, then think, that it is not the will of God thou shouldst have it, and do not blame me, who have set down nothing but what I have performed my self. Now let us see what course we must take to recover our *Sol*; break the Retort, and take what was left at the bottom of it, which thou wilt find black as a Coal, in which black matter thou must look for thy iij Ounces of *Sol*, forasmuch as the Butter has carried but very little of the *Sol* over with it, which thou may'st separate from the black matter, as follows.

Melt good *Nitre* in a strong Crucible, and when it is in Flux, cast into it one piece of your black Matter after another, and the *Nitre* will burn away the *Sulphur* contained in the said Coals or black Matter, and the *Sol* melts down into a Body, pour forth the *Nitre* together with the Golden *Regulus* out of the Crucible into a Cone, and the *Sol* will settle at the bottom in form of a *Regulus*, which, when separated from the *fæces*, appears snow-white and brittle, much resembling a *Regulus* of *Antimony*; the *fæces* are of a red colour, and contain much good. This white *Sol* being expos'd upon the *Cupel* with *Saturn* to a fiery trial, a third part only of the *Sol* will be found remaining of the colour of good *Sol*, two parts being vapour'd away. The Question is now, What that white colour was, which evaporated on the Test? If

thou say'st, that the Coals of the Wool, with the help of the *Nitre*, have rob'd the *Sol* of its colour, thou art not altogether out of the way, nor wholly in the right. If thou say'st, that there is no Mineral Virtue in the Wool, but that the *Sol* became white by the addition of *Mercury*, thou art not wholly out of the way neither; but this is not to be understood of the Common *Mercury* added to the *Sol*, but of the *Mercury* contained in the Wool, which has joined it self with the *Sol*; for Common *Mercury* cannot abide with *Sol* in a strong melting Fire, but flies away, leaving the *Sol* alone, as is well known to Chymists. If thou say'st, that there is a Mercurial Virtue in the Wool, which within a few hours so changeth the Common *Mercury*, that it is able to abide a melting Fire with *Sol*, then it will follow, that by means of the *Salt* which is in Wool any Common *Mercury* may in a short time be made capable of enduring not only a melting Fire, but the *Cupel* also. This I suppose is a plain and evident demonstration, that there is a Mineral Virtue in Animals, and especially in the Superfluities of Nature, which we will now proceed to demonstrate with another Experiment. Now if the Superfluities of Animals are able to do this, have we not reason to conclude, that the right Superfluity of the Microcosme will do the same much better?

Another Experiment to demonstrate, that a Mineral Mercury *and* Sulphur *is contained in the Superfluities of Animals.*

℞. Of filed or rasped Horns of Sheep, Oxen, Goats and Deer, but Harts and Goats Horns are the best, and the Horns of Wild Goats, and the Tusks of Wild Swine yet better; and the Horns of Fishes, which are commonly called Unicorns Horns, and the Elephants Teeth are the best of all for this purpose; but where

these cannot be had, the Experiment may be performed with Goats or Harts-Horn. Dissolve ij Ounces or iij of either of these in a good *Aqua Fortis* which has been abstracted from decrepitated *Salt*, into this Solution put j Ounce of *Sol*, abstract in a Glass Body the *Aqua Fortis* from the Horn, in which abstraction the *Sol* becomes dissolved, and a brown Stone is left behind, which must be melted down in a cover'd and well luted Crucible with a blast, by which means the Horn will be turned into black *fæces*, and the *Sol* will fall white to the bottom, brittle as a *Regulus* of *Antimony*; from whence it follows, since this brittleness and whiteness of the *Sol* could not be caused by the *Aqua Fortis*, that the same must be attributed to the white *Mercury* and *Sulphur* drawn from the Horns. Whereby it clearly appears, that a Mineral force and virtue is hid in the Horns of Animals. What I have said concerning the covering of the Crucible with another, and well luting them together, is not without reason, for if the Crucible should be set open in the Fire, and continue there for some time, the *Sulphur* of the Horns would be kindled and consumed, and the *Mercury* would be revivified and fly away, and the *Sol* would remain unalter'd. For it is to be noted, that the Mineral *Mercury* and the *Sulphur* of the Horns are very tender and volatile, and are soon lost when the operation is not performed, as before hinted, in a close luted Crucible. This Experiment may be done in like manner, with the Superfluities of Fishes, *viz.* their Skales, Teeth, and the Stones or Bones that are found in several of them, and the effect will be found the same as before mentioned.

The same may also be performed, with the Feathers and Egg-shells of tame and wild Fowl. *N. B.* Egg-shells are dissolved with more ease than

Feathers. ℞. The Egg-shells of Hens, Geese, or other Fowl, wash them clean, taking out the inward skin or film, then dry them, and abstract from them a Solution of ☉, and melt the remainder in a close covered Crucible, and you will find the same effect, as before.

If you have a mind to make the same Tryal with Vegetables, then take *Tartar* which is fitter for this purpose, than either the Wine it self, or the Wood of the Vine, instead of *Tartar* of Wine, you may take the *Tartar* that cleaves to the Vessels, wherein the juice of Crabs hath been keep, or the juices of any other sowr Fruit, or instead of *Tartar* we may take the Grounds of Wine, first dried. ℞. Any one of these, and abstract from it a Solution of ☉, melt the remainder as before in a close luted Crucible, and the ☉ will be found white and brittle, like to a *Regulus* of ♁ at the bottom.

From these Experiments it appears, as clear as the day, that a Mineral Virtue is hid in all things: Yet for more abundant Confirmation of this Truth I shall add some further Instances. The same proof may be done with dry or moist Herbs, or Wood, proceeding in the same manner as before hath been taught, with Wool, and we shall find the same effect. In particular, all sort of Corn, Rye, Wheat *&c.* afford a very good Tinture, they must be dissolved, and proceeded with as before mentioned, concerning the superfluities of Animals. If therefore Mineral Powers may be found in all Vegetables and Animals, on which Man feeds, and hath his growth and Sustenance, how can it be denied, but that the same Power must needs be in Man also? Wherefore it is beyond all doubt, that every Man carries the matter of the Philosophers-Stone (tho' raw and unprepared) about with him.

To make this Truth to appear, with fuller and clearer Evidence, I am minded to give the ignorant a sensible Demonstration, that (without mentioning the right Subject of the Philosophers-stone) an universal Medicine for Men and Metals, may be had alone from the despicable and abominable Subject of Mans-dung.

℞. Six, eight or ten ℔ of some healthy Mans-dung, (it must be gathered without any mixture of Urin) and put it into a Glass-body, and pour upon it about the same quantity of rectified Spirit of Wine, stir them with a stick together, set the Glass, with a head fitted to it in *Balneo*, and abstract the Spirit of Wine, which has extracted the Mineral ♃ and ☿ that was in the Dung, and brings it over the Helm: Which stincking Spirit of Wine must be burnt away under a large Refrigeratory Helm, by which means the stincking ♃ of the Dung is consumed in the Flames of the Spirit of Wine, and the incombustible Mercurial *Salt* mounts up in the Flames to the top of the Helm, where it is caught, and is a great Jewel in Physick and Alchimy. If we have a mind rather to have our Celestial *Salt* in a dry Form, then we must abstract the Phlegm from it: Tho' if we intend it for a Medicinal, it is better not to abstract the Phlegm (which is not wholly without some Virtue) but use them together. But if our intent be to make use of this incombustible Mercurial *Salt*, in order to *Metallick* Transmutation, then we must separate its Moisture, and mix the said Microcosmical *Salt* with ☉, and maturate the same to a *Metalline* Tincture. In a Liquid Form, the said Celestial *Salt* is an excellent Medicine for sick and weak People, as having great Sympathy with the Vital Spirit of Man, wonderfully strengthening the same, and in all Diseases performs whatsoever can be expected from an Universal

Medicine; and is not in the least loathsome, being purged from all Stinck and ill Taste, by the Flames of the Spirit of Wine.

This *Aqua Vitæ* of the Philosophers performs also very wonderful things in the Vegetable Kingdom, for if the Seeds of any Herb be steeped for an hour in the same, and then laid upon a Trencher, or any board at some distance from one another, and covered over a Fingers breadth with Earth or Sand, being then exposed to the warm Sun, the Seeds immediately will begin to shoot and grow, even visibly to the Eye, which is very pleasant and curious. But those Seeds which are soft, are more proper for their speedy growth, than those that are hard: The Seeds of Parsley, Cresses, Fennel and Annis, which abound with much Volatile *Salt*, are the best for this Purpose. So that we see, that this Medicine prepared of Mans-dung is truly Universal, as curing the Diseases of all the three Kingdoms, *viz.* of Animals, Vegetables and Minerals. Wherefore if any one can find in his heart, to work upon this loathsome Subject, he will need no other, for that all lies hid in it, which gave one of the Ancients occasion to say,

Laudat Præsentem quælibet Herba Deum.

Each Herb from Earth its head doth raise,
Its present glorious God to praise.

I cannot, but repeat this great Truth once more, that the highest Medicine in the World is most commonly to be found in the most despicable Subjects, God having ordered it so, for to make known his Almighty Power; and that he regards the Welfare of the Poor, as well as of the Rich, willing that all should be helped and relieved, who do not by their own Pride, Laziness and Wickedness withstand

so great Love and Mercy. Had Gods Will been to communicate this Treasure only to the Proud, Rich and Covetous, he would have laid up the same in ☉ and precious Stones, which the Poor cannot go to the Price of, but behold we find to the contrary, that God hath been pleased to hide this Treasure in such despicable and loathsome Subjects, as the Rich do scorn to meddle with, by which means a Door is opened to the Poor, to obtain that which, they reject and despise.

But to return to our Subject, and yet further to Evidence, that a *Metallick* Virtue is hid in Mans-dung, (tho' it be not the true Subject, which the Philosophers point at in Man) and that much good may be done with it, as containing a very glorious ♃ and ☿, I will add this Experiment, lay a Piece of Silver into a Chamber-Pot, wherein is Dung and Urine, let it lye there for some time, and the ☽ will attract the ♃ or Animal Gold, that is in the Dung and Urine, and become colour'd like ☉, which is a sufficient Demonstration, that the matter of the Stone is hid in those Subjects. And forasmuch as it is notorious, that ♃ is the Agent and ☿ the Patient: And that the ♃ alone tingeth, and that ☿ is only tinged: Wherefore it behoves us to fix the ♃, whereby it is fitted to tinge the ☿, bind and fix it: Which to bring about, much searching has been in the World, and still is, tho' for the most part all in vain, very few Seekers going the right way, and therefore mist of their End, tho' in their Search they have found many Arts, some good and others as bad. So we read, that one *Bartholdus Schwartz* a Benedictin Fryar having found in an old Book, that ♃, the Father of Tincture, may be fixed with *Saltpetre*, was resolved to make a Tryal of it, but to no purpose, for the ♃ and *Nitre* being kindled by the Fire, broke his Vessels, Furnace

and all to pieces, whence he took occasion to consider further of the Matter, and invented that mischievous thing called Gun-powder, tho' he fail'd of his fixing of ♃: The Ancient Philosophers, many Ages ago, were not ignorant of that Composition, but would not Communicate the same for Fear of the abuse thereof: And called it a *Basilisk*, because it kills all things it looks upon. Others have set forth *Nitre* and ♃ under the Notion of a watchful, never sleeping, and Fire-spitting Dragon, that guarded the Golden *Fleece*, which *Jason* by *Medeas* direction and Counsel cast into a deep Sleep, and so took away the Golden *Fleece*. *Medea* signifies diligent Study and Meditation, *Jason* the Artist, or Laborator, the Soporiferous Medicine given to the Dragon, the due Fixation of the Matter. Another Benedictin Fryar, *Basil Valentine*, had better Success in fixing ♃ with the help of *Nitre*; which Fixation he hath recorded in his Writings, where he makes *Saltpetre* to speak thus: ♃ *is my best Friend, and withal my greatest Enemy, but when we are duely conjoyned, and made our Marriage Bed in Hell, after we have well sweat together, we cast off all our Impurities, for to beget Children of Wealth and Riches; and in our dead Bodies is found the greatest Treasure, which we bequeath by our last Will*. These are the Words of *Basil Valentine*, wherein he exactly and plainly describes the true Fixation of ♃, save only that he hath not named the Medicine wherewith the watchful Dragon is to be cast into a dead Sleep, and that for good Reason, because the whole Art and Master piece of fixing ♃ with *Nitre* consists therein. And *Paracelsus* writing concerning ♃ saith: *Here with few words many may be helped, were it not against God, for God wills not that all should be Rich, and therefore doth not give the Goat as long a Tail, as to a Cow, for fear he should out of Pride beat out his own Eyes*

therewith: For when a poor Man grows Rich, it commonly makes him Proud, and as sharp as a Razor to others. These are the Words of *Paracelsus*, wherein he declares a great Truth, for God will not have all Men to be Rich, because of the great abuse of Riches, which is too common in the World. But to those, who are dead to the World, and look upon Riches, Money and Goods, as Dust and Smoak, and are Enemies to all sin and wickedness, to these God gives more than themselves desire or wish for, because he knows they will not abuse his Gifts. And so much shall suffice at this time, for my design is not at present to treat of the Fixation of ♃, which I have elsewhere done at large, but only to prove and make out, that the Matter of the Philosophers-stone is to be found in all things in the World, which I think I have done already. Will any make a Tryal, and undertake the Work, 'tis free for him so to do, I have in this Discourse pointed out the right way, tho' I have not revealed the right Matter: But if what I have here set down be well considered of, by the ingenious Seeker, it cannot be long hid from him: Farewel.

A Corollary: Or, Appendix to the foregoing Discourse.

I have in this short Treatise abundantly shewed and verified, that in all Vegetables and Animals, a mineral Virtue lies hid, which is able to Coagulate ☿ in Conjunction with ☉, into a Metal: And that I may be further helpful to the Lovers of Art, I intend here to deliver the whole manner, and Process of fixing ☿, by Excrements and natural Superfluities, to the end that every one, who reads and considers of it, may with ease attain to a true Tincture. In order to which, I am first to put the Reader in mind, what I have already hinted, that as these Superfluities of Nature,

are different and various, so some of them are better for the fixing of ☿ than others: The best of all being, that which *Adam* brought out of Paradise, as a Childs Portion God had bestowed upon him, which I dare not name openly, but shall only set down here, how this Fixation of ☿ may be performed by means of the Superfluities of Animals.

I have, in the foregoing Discourse, declared the manner of Coagulating ☿ with the Wool, or Hair of Animals, so as to suffer himself to be fluxed with ☉ in a strong Fire, without evaporating, only to shew the possibility of it. But now shall set down, how the said Fixation may with Profit be performed, by means of an Animal *Salt Armoniack*. For certain it is, that in Man and all Animals, such a Secret *Sal Armoniack* is to be found, especially in Urine, Hair, Claws, Horns, Skins, *&c.* as also in the Blood, sweat and spittle of Man, which is of force to coagulate and fix *Mercury*.

N. B. The fasting Spittle of Man Coagulates running ☿, being stirred about with a Pestle in a Glass, or Stone Mortar, and so is made fit with Hogs-grease to be made into a Salve. Now after that common ☿ is thus Coagulated with fasting Spittle, if we mix it with Oyl or Butter, to make a Salve of it, we shall find that the ☿ will not unite with the same, but runs together and becomes quick as before, and only suffers it self to be joyned with melted Hogs-grease, but with the fat of no other Animal whatsoever; the Reason without doubt is, because Swine have a great affinity with Man and Metals. Thus we find, that Mans and Swines Blood have this Property, that if the *Calx* of ♄ be for some time boyled in either of them, the ♄ becomes white and hard like ☽; the Reason of which the Reader may be

pleased further to enquire into. Mans Urine also has this Nature and Property, that at one only Sublimation it so Coagulates ☿, that when ♀ is rubbed over with it, it looks as well as if it were Silvered over. And the sweat of Man is partaker of the same Property, of Coagulating and Metallizing ☿, so likewise the Excrements of Man and Beasts, *&c.* But nothing does it more readily than Mans fasting Spittle, wherefore also *Albertus Magnus* saith, that the highest Mineral Power hath its Seat in the Head of Man, and especially between his Teeth, he himself having found, oblong Grains of ☉, between the Teeth of a dead Mans Skull; 'tis very probable, that the Person, to whom the same belonged, had taken ☿ inwardly, which naturally tending to the Mouth and Teeth, had been fixed there by the Mineral Virtue of the Microcosm into good ☉. Now if we see this happen thus in the Body of Man, what reason have we to doubt, but that the same Mineral Virtue may, without the Body of Man, not only fix ☿ into good ☉, but also reduce it to a true and perfect Tincture. Forasmuch then, as this is not only possible, but certain and unquestionable, I having wrought it with mine own hands, and knowing many other easie ways, by means of the natural Superfluities of Animals, to Coagulate and fix ☿, I am the rather inclined to Communicate the same to the World.

I will therefore in the name of God, for the good of Mankind, Communicate the way and Process, I my self at first made use of to Coagulate ☿, and that entirely from the Beginning to the End, and very plainly, not concealing any the least manual Operations. If any one from this Process here set down, chances, to find out a nearer and better way, I shall be glad of it, we know it is much easier, to correct and meliorate a thing already invented, than

to invent it. What I here set down my own hands have wrought, what I have never done or tryed I cannot write, but leave it to those, who are further advanced herein than my self.

A PROCESS.

To fix ☿, by means of natural Superfluities into a true Tincture. ℞. Eight Ounces of Wool, Goats hair, filed Goats or Harts-horn, *&c.* dissolve any of these in a strong *Aqua Fortis*, at the same time dissolve, in an *Aqua Fortis*, that has been abstracted from decrepitated *Salt*, an Ounce of fine ☉, and two Ounces of ☿ in common *Aqua Fortis*, pour all these three Solutions together into a Glass Body, and abstract all the *Aqua Fortis* from the ☉ and ☿; this abstracted stincking Water pour again upon that, which remains in the Glass, and distil it off, repeat this Cohobation six or seven times, and the ☿ by this means will become united, and joyned to the ☉. This Conjunction put into a Glass Retort, and with a strong Fire drive the ☿ from the ☉, which will come over in the form of a thick red Butter, for the ☿ being so far fixed with the ☉, will not without great force be separated from it, especially when the Operator hath made use of a strong fixing Water, or *Menstruum*: However, by the violence of the Fire, he is at length forced to quit the ☉, in which Separation he carries the Soul of ☉ over with him, which makes the *Mercurial* Butter to be of a red Colour; which *Mercurial* Butter, or Water being rectified doth dissolve ☉, and with it may be fixed into a true Tincture.

N. B. This *Solar* Butter may be another way without ☉ be fixed into a Tincture, not necessary to

be set down here. He that hath a List to the work may begin with the Fixation, that is performed with the help of ☉. The ☉ and ☿ that remains in the Retort, may be recovered, as follows hereafter; for certain it is, that much of the ☿ in this Operation continues with the ☉, the Violence of the Fire having been unable to separate it, tho' it may indeed be done another way, whereby we are experimentally assured, that Animals have power so to bind the winged Youngster, as to fix him with ☉ into perfect Tincture, which Fixation would be easie, if the Horns and Hair of Animals did not for the most part turn to Coals which do much hinder Fixation: For when the *Solar* Butter is by the force of Fire driven from the ☉, the Coals of the Hair stay behind with the Fire of ☉ and ☿: Which Coals may either, like other Coals, by means of our wonderful *Salt* be fixed into Tincture, for the ☉ and half fixed ☿ do not hinder, but rather further and help Fixation: Or else, we may joyn to these Coals, a due Proportion of good *Nitre*, and so make of them the always watchful, and Fire-spitting Dragon, and with the help of the *Narcotick* ♆ of ♂ and ♀ cast him in to a dead Sleep, kill and fix him into Tincture. For we must know, that this Animal ♆ is incomparably better, than any Mineral or Vegetable ♆ of Stone, or Wood-Coal. Or else with the help of a fulminating Powder, we may separate the half fixt ☿, from the half disanimated ☉, by which means the *Nitre* kindles the Animal ♆ and consumes it, and then the ☿ being freed from the Bands of ♆ must come over, carrying over with it the yet remaining Soul or Tincture of ☉, which the ☿ in the Preparation of the *Solar* Butter did not bring over: Thus the ☉ becomes more disanimated, and the ☿ (which comes over of a fair Purple Colour) becomes the more richly animated, which Purple coloured ☿

impregnate with the Soul of ☉, may either by it self, be fixed into Tincture, or we may extract the Tincture with the Spirit of Wine, and make use of it as an inestimable Treasure in Physick. But the best way is, with our wonderful *Salt*, to fix these Animal Coals impregnate with ☉ and ☿ like other Wood-Coals into a tinging Carbuncle.

N. B. This wonderful *Salt* must be prepared of Oyl of *Vitriol* and *Nitre*. This is the way I have followed to Coagulate ☿ with ☉, by means of Animal Superfluities. I must own that it is a troublesome Work, especially because of the Stincks, one is obliged to take in. Some Philosophers indeed make mention of a nearer and easier way to obtain an Universal Medicine from Animals: Wherefore he that doth not like the Process, may seek for a better, which if he chanceth to light on, he has reason to bless God therefore, whose Gift alone it is.

A PROCESS*, To Sublime the Coals of* Sol*,* Mercury *and Animal* Sulphur *into Purple coloured Flowers, with the help of a fulminating Powder.*

Set a well luted Glass, or earthen Body, in a subliming Furnace till it be red hot, then cast in so much *Nitre* as you think will be sufficient to kindle thy Coals with, and consume them, to which purpose, thou mayst put three times as much *Nitre*, as the quantity of thy Coals is. When thou seest that the *Nitre* is red hot and in Flux, then cast in upon the *Nitre* a piece of thy Coals as big as a Haslel Nut, and the *Nitre* will immediately kindle the ♃ and consume it, and by this means set the ☿ free; for in the burning away of the ♃, the ☿ is forced to leave the ☉, as not being able to endure so strong a Fulmination: And having by means of the Animal ♃, so intimately united with

the ☉, as to be very hardly separable, but yet by the force of the *Fulmen* being fain to leave it, he in his flight takes the Heart of ☉ along with him, and brings it over in the form of a purple Sublimate, which with the Oyl of *Vitriol* (but much better by means of the universal Coagulator) may easily be fixed into a Tincture. This throwing of the Animal Coals upon the *Nitre*, thou must continue till all thy Coals be consumed, and so thou wilt obtain a ☿ impregnated and tinged with the Soul of ☉, and the ☉ remains of a white Colour, being disanimated by the *Nitre*.

N. B. As oft as you cast a piece of your Coals into the Vessel where the *Nitre* in Flux is, you must immediately clap on the Head again, that the ☿ may not fly away, but be caught therein. For the said ☿ is a great Treasure, and may easily be fixed into a fusible Tincture. Thus you have the whole Process, how by means of Animal superfluities I have handled ☿ with ☉, and what hath been the Success of it: He who shall venture to set upon this Work and finish it, will find much more than I durst set down here.

The nearest and easiest way to fix these *Solar*, *Mercurial* Animal Coals into a Tincture, according to my Judgment is, First to fix the said Coals, by means of a Fixative *Sal Mirabile*: Or else, to mix them with a Volatilizing *Sal Mirabile*, and by Retort distil from them a good graduating Water; we may also add to these Animal Coals such a Fixative water, as is employed to kill and fix the watchful Dragon or *Basilisk*. Every one may choose of these several ways, what pleaseth best: And if any thing by reason of the shortness of time hath been omitted here, the same will be discovered to the Laborator in his Work, if God does not hinder it, whose Blessing is all in all.

Thomas Aquinas had the Art in twenty four hours time, to prepare an universal Medicine from natural Superfluities alone, without any Addition of ☉ or ☿, without Charges, Labour or Trouble, without breaking of Glasses, and without taking in any loathsome Smells. So likewise *Avicenna*, *Albertus Magnus*, *Rhasis*, *Petrus Bonus*, *Joannes Lancinius Rupescissa*, had a much nearer and shorter way, than here we have described, as appears abundantly by their Writings. These Authors took their Subject and putrified it in Horse-dung, and then with the Element of Fire, they fixed the ☿ with the ☉ into a Tincture, in which Labour they were much troubled with the loathsome smell of the Matter. *Morienus* tells us, that the Matter when in Putrefaction, sends forth a stinck like to that which proceeds from Graves, for indeed there is nothing in Man, which doth not stink extreamly, when brought to Solution or Putrefaction. When we dissolve these Animal Matters with Oyl of *Vitriol*, this stink is not so great, as when they are dissolved with *Aqua Fortis*, the same also may be said of Spirit of Salt, when ☉, ☿ and Wool are dissolved in the same, and besides doth more Volatilize the ☉ in order to Sublimation, or Fulmination than *Aqua Fortis* doth. If instead of the Common ☿ we take a ☿ of ♁ for this Work, it will in Fulmination carry more of the Tincture of ☉ over, and the purple Flowers proceeding thence, are much more readily fixed by the universal Coagulator, than those that are made with the Common ☿.

What this universal Coagulator is, I have elsewhere declared, the great use of it is very evident, in that volatile Tinctures can hardly be fixed without it: For this Coagulator makes all volatile Corrosive *Metalline* Spirits fix so as to be able to endure the Fire, which without it require a long time. And therefore, he who

doth not know it, or the use of it, must needs find the fixing of volatile Spirits very tedious and troublesome, whereas those that know the use of it, may perform more as to the fixing of Tinctures in three days time, than others without it can do in a whole Year. For there is nothing in Nature so Volatile, which this Coagulator doth not fix, as *Turba* testifies, saying that if God had not created our *Sal Armoniack*, all Chymical Labour would be in vain. Which indeed is the very Truth: For without a good *Sal Armoniack* it is impossible to extract the Tinctures from Metals and Stones, or to purifie and subtilize them to the highest Degree; and without preceeding Subtilizing, there can be no ingress into compact Bodies: For the more that any Tincture is Subtiliz'd and Volatiliz'd, the more readily, after Fixation, doth it enter all hard and compact Bodies. Wherefore if God had not created this Coagulator, these volatile Tinctures, how high soever they might be in Colour, would be of no use for the Transmutation of Metals. Thus we find, that in *Alchimy* these two principal Keys are extremely necessary: The first opens, makes Volatile, and Purifies and gives Ingress; the other binds and fixeth the Volatile, so as to make it endure the Fire, without which Fixation all Volatilization is in vain. O the Pains that I have formerly taken for to fix ☿, ☉, ♃ and other such like Volatile Metalline Spirits, whereas now it is most easie for me to do all this, and much more, with the help of my universal Coagulator, the knowledge and discovery of which must be fetched from the Principal Agent, or secret Fire of the Wise Men.

I cannot upon this occasion pass by discovering another Property that is found in our Animal Subject, *viz.* that it can in one distillation resolve all Metals, none excepted, into a running *Mercury*, which is a

thing very wonderful, that fixt Gold and Silver should be so easily reducible to Volatile *Mercury*, seeing their Bodies are by nature kept in such strong bands. Of which Reduction of Metals to quick *Mercury*, no Person hath writ more clearly than *Basil Valentine*. The Ancient Philosophers have indeed writ much concerning the volatilizing of fixt Metals, but did never declare, that, by this Volatilization, they understood a reduction of them to running *Mercury*, for which reason this Art also hath been so little known. The Ancient Philosophers have recommended this volatilizing and fixing of Metals to us in these following Verses.

Fixum si solvas, faciasque volare solutum,
Et volucrem figas, faciet te vivere tutum.

Dissolve the fixt, and make it then to fly,
And fix the Fledge, and thou shalt dwell on high.

With these few words the Philosophers have declared their whole Work, but without any further explaining of them; so that the manner of compendiously volatilizing and fixing of Metals has been left in the dark. But because the end of this wicked World draws nigh, God is pleased to reveal these Secrets to some of his Chosen, which Talent mercifully bestowed upon me, that I might not be guilty of concealing, I have in the Seventh Part of my *Prosperity of Germany* at large set down the way to Meliorate the meaner Metals, with the help of Animal Salt Spirits, and that so plainly, that every one may understand it, and the Poor (if they will put their hands to the Work) may have abundantly wherewith to maintain themselves.

Moreover these Superfluities of Nature are endued

with this power and property, that in one days time they can destroy fixt Gold, that resists all the Elements, so as to be no more *Sol*, but will suffer it self to be melted into a green fusible Stone, which is of wonderful force and virtue in all Metallick Operations, of which it is not needful to speak more at present. If God thinks fit to bestow this Green Stone upon thee, he will not suffer thee to be ignorant what use may be made of it. I cannot, upon this occasion, but communicate something that is very wonderful. As I was on a time melting some of this Green Stone in a Crucible, it happened to run through the Crucible into the Furnace, where some Silver was run out a little before, with which the Green Lion joyn'd himself; and when I came by fusion to separate my *Luna* from the Green *Sol* Stone, or my destroyed *Sol*, I found that my Green Stone had never been throughly united with my *Luna*, the Stone continuing still green without any the least alteration, but my *Luna* was become black and brittle like *Antimony*, and went away upon the *Cupel*. Now, what more wonderful change can be imagin'd than to see white fixt *Luna* changed into black volatile Lead? Upon occasion of this wonderful Transmutation one of the Philosophers cries out, as struck with admiration; *Nunquid Natura Retrograda?* What is Nature then turn'd Retrograde? Mind well this point, consider of it, and you will discover wonders; for when *Sol* is so far destroyed as to be no longer *Sol*, then the greatest wonders may be accomplish'd by it. Yet know, that it is no easie matter so to destroy *Sol*, that it shall be *Sol* no more; the Ancient Philosophers unanimously declaring, than it is easier to make Gold, than to destroy it.

N. B. This Green Gold-Stone being kept for some time in the Fire, becomes changed to a red colour,

which is also of great use, he who desires to know more of it, may seek for it, as my self and others have been fain to do.

N. B. The *Salt* of the greater World (I mean Common *Salt*) changeth the Metals that lie in it for a long time, into a hard Stone, as appears from this instance; Some Fishermen here in *Holland*, lately took up from the bottom of the Sea some Blocks of *English* Tin, whose outside was turn'd to perfect Stone, the inmost part of them still remaining Tin; Who knows, how many hundred years this Tin had lain at the bottom of the Sea, before this change was made; but if the Sea *Salt* of the greater World can perform this in a long time, the Sea *Salt* of the lesser World can destroy Metals in a very short time, for our Animal *Salt* can do more in a few hours time, than the Sea *Salt* of the Macrocosme can do in an 100 years.

Wherefore I recommend to the Lovers of this Art to study the nature of *Salts* and their use, if they intend to perform any thing Extraordinary either in Physick or Alchimy.

N. B. The *Salt* of the Microcosme hath also this property, that when it is put into *Aqua Fortis* it not only dissolves *Sol* but *Luna* also, and is an excellent way to extract the Gold and Silver that is in Sand and Stones, concerning which Extraction I treat at large in the Seventh Part of the *Prosperity of Germany*.

N. B. Another virtue of this Microcosmical *Salt* is, that it extracts the Tincture of Gold, and leaves the Body thereof white. And if we afterwards take this impregnate *Salt*, and extract the Tincture of Gold from it with Spirit of Wine, and burn away the said

Spirit under a Refrigeratory Helm or Head, then the Celestial Salt, or the Water of Life of the Philosophers, will be conveyed into the Glass Receivers, and is very sweet and pleasant, but withal so subtil and volatile, that the Air attracts and snatcheth it away, if it be not immediately pour'd out of the recipients, and carefully kept in a close stopt Glass.

N. B. At the bottom of the Cup or Dish wherein the Spirit of Wine, impregnate with the Tincture of Gold, hath been kindled and burnt away, you will find the Tincture of Gold in the form of a Blood-red, pleasant, fragrant, Aromatical Oil, which is true living *Sol*, and never stands still, but is in continual motion, perpetually changing from one form to another. In a word, it is the true living *Sol* of the Philosophers, which by Art is made of Common Gold, that is dead, which Living Philosophick Gold, fragrant Dragons Blood, Incombustible Oil, and true Potable Gold is without doubt the highest Medicin that is in the World.

N. B. In the foresaid manner we may also extract the Tinctures from *Mars* and *Venus*, as also from *Antimony* and *Sulphur*, and with the assistance of the flame of Spirit of Wine maturate them into most lovely, fragrant, incombustible Tinctures. For by means of our Microcosmical *Salt* all Metals and Minerals may be reduc'd to Potability, without the help of any Corrosive, in which state they are the most powerful Medicaments imaginable, to which the very best Remedies of the Galenists are not in the least to be compared. But no Man ever attained these Secrets that was afraid to smut his Hands with Coals, or that was not earnest in his Prayers to God for the discovery of these wonders; their Silk Clothes, Velvet

Coats, Artificial Cant, and vain Aristotelical Philosophy, cannot produce any shell effects, but the Fire alone which is the effecter and displayer of Wonders. Wherefore no Man can come to be a true Philosopher save only by Fire, which alone hath the power to remove that which is evil, and to manifest and bring to light the inward concealed Good, which is true in an Earthly as well as Heavenly sense. I repeat it once more, that he, who doth not know Fire, and its hidden Divine Virtue and Operation, is a pitiful Philosopher, and doth not at all deserve that Title, for the Light is hid from him, and consequently all Nature appears vail'd and dark to him; which matter I have treated of at large in my *Celestial and Terrestrial Purgatory*.

Besides all that hath been said already, many other great, yea incredible, things may be performed with the help of Animal Excrements and Superfluities, and in particular the extraction of Silver and Gold out of Sand, Stone and Poor Oar, that is not worth the melting, as shall be at large declared in the Seventh Part of my *Prosperity of Germany*.

It may be said with truth, that never yet did any Man find out all the Virtues that are contained in thefts Superfluities of Nature, they being indeed greater than can be believed, which is the reason, why the Philosophers would never call these contemptible and loathsom Subjects by their own names, but have covered and concealed them under Metaphors and Allegories, that the great secrets contained in them might not be prostituted to the Proud unworthy World.

I do intend, God willing, with the first occasion to treat more at large concerning the nature and use of these Animal Superfluities in the Seventh Part of the

Prosperity of Germany, where I shall, amongst other things, demonstrate, that these Superfluities of Nature are not only able to exalt *Sol* and *Luna* in their colours, but also to augment them to infinity in quantity and quality; I shall also plainly discover the way, how from Sand and Stone and the meanest of Metals, Gold and Silver may be extracted, so that every one, that is but little acquainted with the managing of Fire, may, with little charges in his own House, entertain and keep going a profitable and rich Mine of Gold and Silver, for the comfortable support of himself and family, to which God be pleased to grant his Grace and Blessing. *Amen.*

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