ED. JAMES' STANDARD SPORTING SERIES, No. 4.



# PRACTICAL TRAINING







BY E. P. JAMES, N.Y.

# The Project Gutenberg eBook of Practical Training for Running, Walking, Rowing, Wrestling, Boxing, Jumping, and All Kinds of Athletic Feats

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*** START OF THE PROJECT GUTENBERG EBOOK PRACTICAL TRAINING FOR RUNNING, WALKING, ROWING, WRESTLING, BOXING, JUMPING, AND ALL KINDS OF ATHLETIC FEATS ***




GEORGE SEWARD, THE AMERICAN WONDER, who ran 100 yards in 9¼secs.

# PRACTICAL TRAINING

# FOR
# RUNNING, WALKING, ROWING, WRESTLING, BOXING, JUMPING,
# AND
# ALL KINDS OF ATHLETIC FEATS;
# TOGETHER WITH
# TABLES OF PROPORTIONAL MEASUREMENTS FOR HEIGHT AND WEIGHT OF MEN IN AND OUT OF CONDITION;
# INCLUDING
# HINTS ON EXERCISE,

# DIET, CLOTHING, AND ADVICE TO TRAINERS;

## ALSO,

# BANTING'S SYSTEM OF REDUCING CORPULENCY,

## AND

# RECORD OF FAST ATHLETIC PERFORMANCES.

## BY


## ED. JAMES,

**AUTHOR OF "MANUAL OF SPORTING RULES," "THE GAME COCK,"**

**"TERRIER DOGS," ETC., ETC.**

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# PREFACE.

Notwithstanding that so many books have been written on PHYSICAL CULTURE, there still remained a large field to be covered—hence the publication of the present volume. Great care having been taken in its compilation, we feel confident that the work will be in every sense of the word practical; so that those who desire may follow whatever their fancy prefers in athletic sports, in a creditable manner. In our opinion, the general usefulness of the book could in no way be improved upon; but, in order to be thoroughly posted in the laws governing athletic contests, the "MANUAL OF SPORTING RULES," as a companion to this work, will be found very beneficial. The table of Proportional Measurements, according to height and weight, will form a good guide for the athlete as to his special muscular development. Banting's System of Reducing Corpulency, though not exactly intended for training purposes, is not to be despised, containing, as it does, much interesting and reliable information, on the subject of diet especially. To complete the treatise, and in order to prove what can be done by man when in proper physical condition, we add a record of the best athletic performances.

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# PRACTICAL TRAINING.

# PRELIMINARY REMARKS.

[*According to* CHARLES WESTHALL, *a physician, as well as one of England's greatest pedestrians*.]

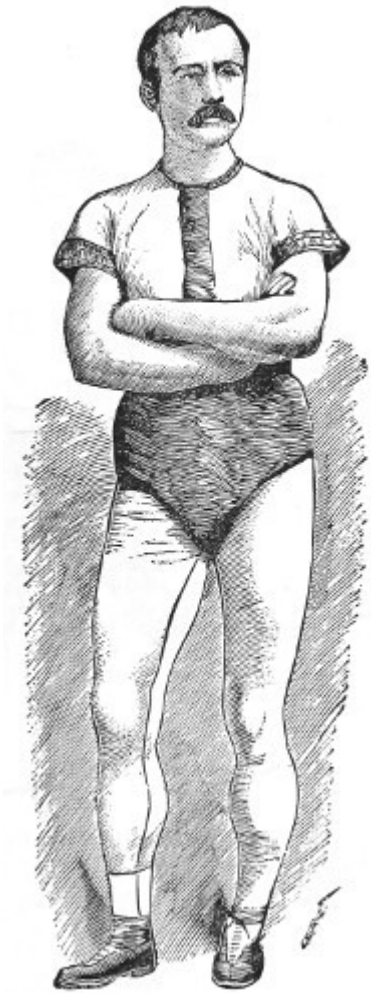
Pedestrianism, from its being the basis and principal agent in securing a thorough and perfect training to all who may have, from choice or necessity, to undergo a great amount of physical exertion, may be considered the chief feature in the preparation of men for all contests in which great strength, speed, and wind may be required. From this point of view the science of walking will be treated in the present work; for whether a man may have entered in an engagement to run, walk, jump, swim, row, or box, no training can be thoroughly accomplished until the athlete has undergone a certain amount of exercise on foot, and reduced his superfluous weight to such an extent that he can follow up his peculiar forte with fair chance of improvement, or at least so that he may not have to stop short from sheer want of wind or strength.

Pedestrianism, which has before been stated to be more or less indispensable to the man undergoing preparation, from its healthful and beneficial effect upon the human frame, is of most vital importance in keeping the required equable balance which should exist in every constitution, whether robust or otherwise. Good training is as requisite to any man who wishes to excel, as it is to the thoroughbred race-horse. A man who is fleshy and obese might as well attempt to compete with a well-trained man as the race-horse that has been fed for a prize-show to

again enter the lists with his highly-prepared and well-trained contemporaries. A man may be endowed with every requisite in health, strength, muscle, length, courage, bone, and all other qualifications; but if untrained, these qualifications are of no value, as, in every instance, a man or horse, well-trained, of much inferior endowments, has always under the circumstances proved the victor. Good condition, which is the term used by trainers to indicate the perfect state of physical power to which the athlete has arrived, is one of the greatest safeguards to his health; as, in many instances, severe and long-continued exertion when unprepared has had an injurious and continuous effect on the constitution, and, in some few but fortunately almost isolated cases, produced almost instant death. These few words are not alone intended for the man who has to compete, but for a great portion of mankind, who go through the regular routine of life day after day, their business being sometimes performed with apathy, and the remainder of their time passed in excessive smoking, eating, drinking, sleeping, sitting, or any small pet vice to which they may be addicted. That such a man can undergo the same process of training as the professional who has an engagement to perform some arduous task against time or a fleet antagonist, we do not ask or expect—his occupation would not allow the same time; but the assertion that he would perform his allotted duties with more pleasure to himself and more satisfaction to all concerned if he were to submit to undergo a partial training, is a truth that ought to be tested by all who have any regard for continued good health. Were this system carried out to even a small extent, the physician would have cause to lament the decline of his practice, and the advertising quack become a

nonentity. As a proof how necessary training is considered by the professional, it is only requisite to ask any *pedestrian* of note for his candid opinion to satisfy the most incredulous. The higher in the pedestrian grade the man may be to whom the question may be put the better, in consequence of his having gone through the whole performance, from novicehood upwards; and, in every instance, it will be found that more than one of his defeats will be attributed to want of condition (proper training) arising from neglect of work or other causes, such as carelessness in diet, want of practice, and, in some instances, from the neglect of the precepts attempted to be inculcated by his trainer. Most of the above mistakes have arisen from overweening confidence in his own powers, or from underrating his adversaries' abilities. However willing and thoughtful he may have been, these *contretemps* have almost invariably been the fate of all our leading athletes, not only in the pedestrian circle, but in the ring, on the water, and in all sports in which a great lead has ever been taken by man. He will inform the querist that he will require from a month to two months for his preparation, and if he has been out of practice for some time, even more—thus showing to the dullest intellect the requisite time and attention needed; for if a man who has shone pre-eminent in the sphere he has chosen for his exertions, and has had the benefit of previous trainings, must again undergo the same ordeal as heretofore, a man totally untrained must at least require the same preparation, as well as a greater amount of practice, to fully develop his particular forte as a pedestrian. To sum up in a few words, training is a complete system of diet and exercise duly carried out and strenuously adhered to. From the mode of life which almost all

lead, the health becomes impaired, and the only remedy will be discovered by him who follows the principle of training in some form or other, the more simple the better. That the same system of training will suit all constitutions, it would be absurd folly to advance; or that the same amount of work and strictness of diet is requisite for a man about to run a race of one hundred and twenty yards, as for a struggle of an hour's duration, would be equally preposterous. Nevertheless, the groundwork of training arises from the benefits derived from regular diet and steady exercise. Training will bring out all the hitherto latent powers of the athlete, raising the man who has previously been considered almost a nonentity into public notice, the one of mediocre calibre into the first rank, and thoroughly develop the excellencies, etc., of the first-class proficient to an extent that will not only surprise himself, but his associates and long-tried friends and backers.



CHARLES ROWELL, Champion Long-distance Pedestrian of the World.



WILLIAM GALE, who walked 4,000 quarter miles in 4,000 consecutive 10 minutes.

TRAINING is the process of getting a man who has to perform any muscular feat from a state of obesity and almost total incapability into a perfect state of

health, which is shown by the great increase of strength, activity, wind, and power to continue great exertion and pace to the extent of his endowments. It is this acquired power which enables the pedestrian to persevere in his arduous task, apparently in despite of nature, which, but for his thorough preparation, would have long before been utterly prostrate. So much is depending on, and so many results accruing to the efficiency of the trainer, that a few words of friendly advice to that official will not be out of place; for although the veteran has learned the precepts given below by heart, yet there is always a beginning to all occupations. As a rule, a great pedestrian is not qualified at the outset of his career as a trainer to undertake the care of most men, in consequence of there being a leaven of the remembrance of the manner in which he went through his work, etc., which will in most instances render him less tolerant than is requisite to the man of mediocre talent. Another difficulty is to find one with sufficient education and forethought to be able to study the different constitutions of the men under his rule. The above are only a few of the objections; but all are of consequence, so much depending upon the treatment of the man independent of his daily routine of exercise and diet. The man who goes first into training is like an unbroken colt, and requires as much delicate treatment. The temper of the biped ought to be studied as carefully as that of the quadruped, so that his mind can be carefully prepared for his arduous situation, which is one of abstinence, and in some cases total deprivation, which always tries the patience and frequently the temper of the competitor, who in these cases should be encouraged by word and example, showing that the inconveniences he is undergoing are but the

preliminary steps to the attainment of that health, strength, and elasticity of muscle which have caused so many before him to accomplish almost apparent impossibilities. Such a trainer is worth a hundred of those who have no judgment in the regulation of the work which a man may take without in any way making him anxious to shun his duty or to turn sullen. Let the trainer bear in mind and always remember that a fit of ill-temper is as injurious to the man in training as any other excess. In many instances, from a supposed well-founded cause of complaint, a continued civil war has arisen in the cabinet, which has not been quelled, perhaps, until the dissension has had a very serious effect in destroying the pedestrian's confidence in his trainer's capabilities and temper, as well as throwing back the trained man most materially in his advance towards condition. Nevertheless, the mentor should be firm in his manner, intelligible in his explanations, and by no means bigoted in his favorite notions respecting the use of any particular medicine or "nostrum" which he may think may be requisite to the welfare of his man. The trainer, of course, is known or supposed to be of sterling integrity, and having the welfare of his man as his first aim; and on this in a great measure depends the monetary interests of the man and his backers. We are sorry to have to mention that such a man is requisite as a trainer, but consider it necessary to mention it, as, if the trainer is not honest, and has not his heart in the well-doing of his man, all the pains taken by the pedestrian would be nullified and rendered of no avail. The trainer must be vigilant night and day, never leave his man, and must act according to his preaching, and be as abstemious, or nearly so, as his man, whom it is his duty to encourage in improvement, to

cheer when despondent, and to check if there are at any time symptoms of a break-out from the rules laid down—but at all times he must, by anecdote, etc., keep the mind of his man amused, so that he may not brood over the privations he is undergoing. Let the trainer not forget that cleanliness is one of the first rules to be attended to, and that the bath can hardly hurt his man in any season if only due precautions be observed, always bearing in mind that it is a preventive instead of a provocative to colds, catarrhs, and the long list of ills attendant upon a sudden chill. The duration of the bath is, of course, to be limited, and a brisk rubbing with coarse linen cloths until the surface is in a glow will always be found sufficient to insure perfect safety from danger. Of course, the amount of medicine required by any man will depend upon his constitution as well as the lowness of his nervous system, in some cases there being no occasion to administer even a purgative. But these are the times when the skill of the trainer is brought into requisition, and if he knows his business he will in these instances give his man stimulating and generous diet, until he is enabled to undergo the necessary privations to get him into a proper state to be called upon to work to get into condition. In no instance ought he to allow his man to sweat during the days on which he has taken a purgative, as in many instances men have been thrown back in their preparation, or, as it is professionally termed, “trained off.” The best test when all the superfluous flesh has been trained off by sweating, by long walks or runs, as the case may be, is taken from the fairness and brightness of the skin, which is a certain criterion of good health. The quickness with which perspiration is dried on rubbing with towels, sufficient leanness and hardness

of the muscles, is also the right test that reducing has been carried to the proper extent.

## TRAINING FOR PEDESTRIANISM.

There being so many classes of individuals who may derive benefit from training, each of whom have different modes of living, and whose particular line of excellences are as different from each other as light from dark, it must be patent to all that the same system carried out to the letter would not have the same beneficial effect on all, the more especially in the dietary system, which, in almost every case, would require some change, as no two men have ever scarcely been found to thrive equally well on a stereotyped rule. The pedestrian alone comprises a class by itself, which is subdivided into as many different ramifications as there are other sports and professions that require severe training; therefore, as pedestrianism is the groundwork of all training and all excellence in athletic games, it is the intention to give the hints requisite for the man who is matched to get himself sufficiently well in bodily health and bodily power to undergo his practice with credit to himself and trainer, and justice to his backers. In all engagements for large amounts there is almost invariably a trainer engaged to attend to the man who is matched, who is supposed to thoroughly understand his business; therefore these few words are not intended for the guidance of those in the said position, but for those who may wish to contend for

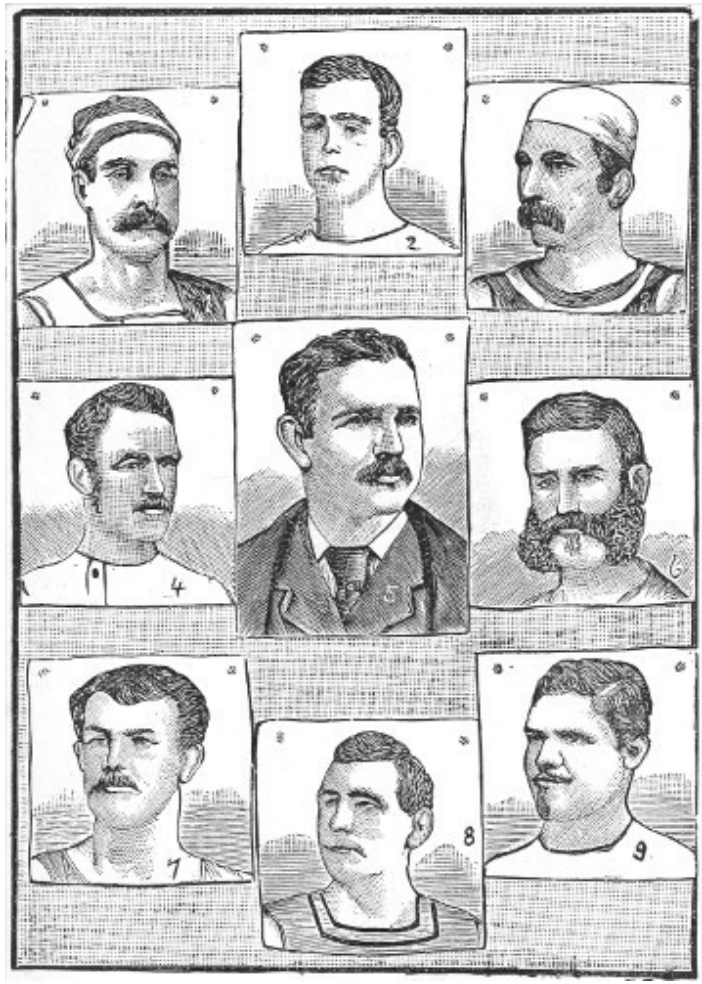
superiority, for honor, or small profit. The same amount of work and strict regimen is not requisite for the sharp burst of a hundred yards or so, that it is imperative on the trained man to undergo if in preparation for the more arduous struggle of a mile's duration; but, as stated before, the theory of the practice is the same. Westhall found that the more work he had taken at the commencement of his training, after having undergone the requisite medical attention, the easier and better his fast trials were accomplished when hard work was put on one side and daily practice took place against a watch. Yet he, in pedestrian language, could race up to a hundred and sixty yards, but not finish two hundred properly—could run three hundred yards and a quarter of a mile, but yet not be equally good at three hundred and fifty. The same was found to be the case at the different distances up to a mile, which is the farthest distance he had practiced. The first and primary aim ought to be the endeavor to prepare the body by gentle purgative medicines, so as to cleanse the stomach, bowels, and tissues from all extraneous matter, which might interfere with his ability to undergo the extra exertion it is his lot to take before he is in a fit state to struggle through any arduous task with a good chance of success. The number of purgatives recommended by trainers are legion, but the simpler will always be found the best. A couple of anti-bilious pills at night, and salts and senna in the morning, has answered every purpose. It is reasonable, however, to suppose that anyone who has arrived at sufficient years to compete in a pedestrian contest has found out the proper remedies for his particular internal complaints. The internal portion of the man's frame, therefore, being in a healthy condition, the time has arrived when the

athlete may commence his training in proper earnest; and if he be bulky, or of obese habit, he has no light task before him. If he has to train for a long-distance match, the preparation will be almost similar, whether for walking or running. The work to be done depends very much on the time of year. In the summer the man should rise at five in the morning, so that, after having taken his bath, either shower or otherwise, there will have been time for a slow walk of an hour's duration to have been taken before sitting down to breakfast—that is, if the weather be favorable; but if otherwise, a bout at the dumb-bells, or half an hour with a skipping-rope, swinging trapeze, or vaulting-bar, will be found not unfavorable as a good substitute. Many men can do without having any nourishment whatever before going for the morning's walk, but these are exceptions to the rule. Most men who take the hour's walk before breaking their fast feel faint and weak in their work after breakfast, at the commencement of their training, and the blame is laid on the matutinal walk; when, if a new-laid egg had been beaten in a good cup of tea, and taken previous to going out, no symptom of faintness would have been felt, although it is expected some fatigue would be felt from the unwonted exertion. The walk should be taken at such a pace that the skin does not become moist, but have a good healthy glow on the surface, and the man be at once ready for his breakfast at seven o'clock. The breakfast should consist of a good mutton chop or cutlet, from half a pound upwards, according to appetite, with dry bread at least two days old, or dry toast, washed down with a cup or two of good tea (about half a pint in all), with but little and if possible no milk. Some give a glass of old ale with breakfast, but it is at this time of the day too early to

introduce any such stimulant. After having rested for a sufficient time to have allowed the process of digestion to have taken place, the time will have arrived for the work to commence which is to reduce the mass of fat which at this time impedes every hurried action of the muscle and blood-vessel. This portion of the training requires great care and thought, for the weight of clothing and distance accomplished at speed must be commensurate with the strength of the pedestrian. At the commencement of the work a sharp walk of a couple of miles out, and a smart run home, is as much as will be advisable to risk. On the safe arrival at the training quarters, no time must be lost in getting rid of the wet clothes, when a thorough rubbing should be administered, after which he should lay between blankets, and be rubbed from time to time until the skin is thoroughly dry. Most of the leading pedestrians of the day now, when they come in from their run, divest themselves of their reeking flannels, and jump under a cold shower-bath, on emerging from which they are thoroughly rubbed down, which at once destroys all feeling of fatigue or lassitude. In a few days the pedestrian will be able to increase his distance to nearly double the first few attempts at a greater pace, and with greater ease to himself. After again dressing, he must always be on the move, and as the feeling of fatigue passes away he will be anxiously waiting for the summons to dinner, which should come about one o’clock, and which should consist of a good plain joint of the best beef or mutton, with stale bread or toast, accompanied by a draught of good sound old ale, the quantity of which, however, must be regulated by the judgment of the trainer. It has been found of late years that extreme strictness in all cases should be put on one side, and

a small portion of fresh vegetables allowed, such as fresh greens or potatoes; and, in some instances, good light puddings have been found necessary to be added to the bill of fare when the appetite, from severe work or other causes, has been rendered more delicate than usual.

The continued use of meat and bread, unless the man has a wonderful appetite and constitution, will once, if not more, in almost every man's training, pall upon his palate, when the trainer should at once try the effect of poultry or game, if possible; but, at any rate, not give the trained man an opportunity of strengthening his partial dislike to his previous fare. In cases like these, the only wrong thing is to persevere in the previous diet; for if a man cannot tackle his food with a healthy appetite, how is it possible that he can take his proper share of work? The quantity of ale should not exceed a pint, unless there has been a greater amount of work accomplished in the morning than usual, when a small drink of old ale at noon would be far from wrong policy, and a good refresher to the imbiber. Wine in small quantities is sometimes beneficial, but should not be taken at all when malt liquors are the standard drink. If it is possible to do without wine, the better. The chief thing in diet is to find out what best agrees with the man, and which in most instances will be found to be what he has been most used to previously.



CELEBRATED SINGLE-SCULL OARSMEN,

| | | |
|---|---|---|
| 1. Chas. E. Courtney. | 2. W. Ross. | 3. Jas. H. Riley. |
| 4. Ed. Trickett. | 5. Ed. Hanlan. | 6. E. C. Laycock. |
| 7. Warren Smith. | 8. J. Higgins. | 9. W. Elliott. |



FRANK HART, Second Winner of the O'Leary Champion American Belt.

After a thorough rest of an hour's duration, the pedestrian should stroll about for an hour or two, and then, divesting himself of his ordinary attire, don his racing gear and shoes, and practice his distance,

or, at any rate, some portion of the same, whether he is training either for running or walking. This portion of the day's work must be regulated by the judgment and advice of the trainer, who of course is the holder of the watch by which the athlete is timed, and is the only person capable of knowing how far towards success the trained man has progressed in his preparation. It is impossible for the pedestrian to judge by his own feelings how he is performing or has performed, in consequence of, perhaps, being stiff from his work, weak from reducing, or jaded from want of rest. The trainer should encourage his man when going through his trial successfully, but stop him when making bad time, if he is assured the tried man is using the proper exertion. The rule of always stopping him when the pedestrian has all his power out, and yet the watch shows the pace is not "up to the mark," should never be broken; for the man who so struggles, however game he may be, or however well in health, takes more of the steel out of himself than days of careful nursing will restore. If stopped in time, another trial may be attempted on the following day, or, at any rate, the next but one. In a trial for a sprint race, which of course must be run through to know the time, if the day is any way near at hand, suppose a week or ten days off, total rest should be taken the following day until the afternoon, when another trial should take place, when a difference in favor of the pedestrian will in most instances be found to have been accomplished. In Westhall's experience in sprint racing there has been invariably the above successful result. Of course, after the trial a good hand rubbing should be administered, and the work of the day be considered at an end. Tea-time will now have arrived, and the meal should consist of stale bread or toast and tea, as

at breakfast, and, if the man has a good appetite, a new-laid egg or two may be added with advantage. In the summer a gentle walk will assist to pass away the time until bed-time, which should be at an early hour. Before getting into bed another good rubbing should be administered, and the man left to his repose, which will in most cases be of the most sound and refreshing character.

## SLEEP.

Of this eight hours is an outside limit, and from six to seven will generally be found sufficient, retiring to rest not later than 11 P. M., and rising from about 6 a. m. to 7.30. A. M., according to circumstances. The bedroom window should always be kept open at top and bottom, slightly in winter and wide in summer. Foul air generated by the human breath is never more hurtful than in a bedroom. Too much clothing should not be placed over the chest whilst sleeping, as by so doing respiration is more labored, and the legs and extremities, not the trunk, require extra covering for purposes of warmth. A mattress should be always used to sleep on, never a feather bed. High pillows and bolsters are very injurious. The natural height to which the head should be raised in sleep is about the thickness of the upper portion of the arm, which constitutes the pillow as designed by nature.

# CLOTHING.

Flannel should be worn next the skin throughout the year, but beyond this no restriction is necessary when in mufti. The best attire for running is a pair of thin merino or silk drawers, reaching to the knee and confined round the waist by a broad, elastic band. For the upper part of the body a thin merino or silk Jersey is the best. No covering for the head is usually worn, but, in a race of such long duration as a seven miles walking or ten miles running contest, it is advisable to wear a cap or straw hat if the rays of the sun are very powerful. For running, thin shoes made of French calf, and fitting the foot like a kid glove when laced up, are worn. The sole should be thicker than the heel, and contain four or five spikes, the lacing being continued almost down to the toe. For walking races, the heel should be thicker than the sole, and containing a few sparrow-bill nails, none being required in the toes. Chamois leather socks, just covering the toes, but not reaching above the top of the shoe, are the best adapted for running. Ordinary merino socks, but not thick and heavy like worsted ones, and worn over the chamois leather coverings, are the best for walking, as they prevent the dust and grit raised from the path from getting between the shoe and the foot. Except for sweating purposes, heavy clothing should never be worn in practice, the gait and stride being much impeded thereby. A piece of cork of an elongated, egg shape should be grasped in each hand while walking or running.

# TIME AND DURATION OF TRAINING FOR RUNNING.

The foregoing are the foundation rules which constitute training, but of course they require modification according to circumstances, which must be left to the judgment of the pedestrian or the trainer, if he has that necessary auxiliary to getting into good condition. For instance, the man has had too much sweating and forced work, in consequence of which he is getting weak, and, in the professional term, “training off.” This will easily be recognized by the muscles getting flaccid and sunken, with patches of red appearing in different portions of the body, and the man suffering from a continual and unquenchable thirst. These well-known symptoms tell the trainer that rest must be given to the pedestrian, as well as a relaxation from the strict rule of diet. A couple of days’ release from hard work will in most cases prove successful in allaying the unwelcome symptoms, and far preferable to flying to purgatives for relief.

The space of time which will be required by a young and healthy man will be from six weeks to a couple of months; but longer than this, if possible, would be preferable—not that it would be really wanted to improve on the mere physical condition of the man, but to enable the pedestrian, when able, to go to any limit as regards exertion, and to have *time* for practice at his particular length; for, however fit a man may be as regards the proper leanness, if unpractised he would have no chance of success. The principal rules of training, therefore, are regularity, moderate work, and abstinence; the other adjuncts

are but the necessary embellishments to the other useful rules. When training for running a long distance—say from four to ten miles—the man should most decidedly practice daily; for the shorter length going the whole distance, and for the longer vary the distance, according to the state of health on the day, as well as whether the weather be fine or otherwise. For a short race of a hundred or two hundred yards, the pedestrian, after the body is in good health, does not require very much severe work, but the distance must be accomplished at top speed at least once daily, and about the same time of the day that the match will take place, if possible. The same rules, with comparatively more work, will apply up to 440 yards—a quarter of a mile—after which distance more work becomes necessary.

## SPRINT RUNNING.

Let the novice, some five weeks or so before the day of his race, begin his practice by a steady run, three or four times a day, of a quarter of a mile or so; so gently at first as to produce no stiffness of the muscles when the temperature produced by the exercise has subsided, and the circulation has recovered its usual condition. When the novice has got his legs into moderate good fettle, so that they could stand a little sharp work, he might quicken up for about 50 yards in each of his quarter spins; and as he finds these spins can be accomplished without the slightest strain on any muscle, the long distances

may be condensed into two a day, and two sprints of his distance at about a fifth longer time than he would take in the race. By this means the muscles get worked up by degrees to bear the necessary strain required.

As he finds his muscles become hard and flexible, he should lessen the length of his spins until they are of the same length as in the race. This point will be arrived at some nine days or so before the day, and in these nine days all his energies must be devoted to practicing starts and getting quickly into stride. As the day approaches, let him obtain the services of some sprint runner to use as a trial horse; and the best way of turning his trial horse to account is by making him start slowly some 10 yards in the rear, and, as he passes the novice, who is ready at the scratch, let him quicken up into racing pace for about 50 yards. By this means the novice is encouraged to get off quickly, and a surer line can be taken as to improvement in starting than if the trial and himself started on even terms. Again, the tendency of all young runners to watch their adversary at the start is counteracted, the opponent in this way being in advance, with a straight course only left open for the novice to the goal. So many sprinters, from standing in a wrong position at the scratch, or from taking a longer stride with one leg than the other, jostle or run across their opponent in the spin, thereby either losing their own chance of success or depriving others of it. A bad beginning makes a bad end, and nothing is so detrimental to a sprinter as a bad start. He may get shut out, he loses his stride, or perhaps get spiked by the man who has crossed him; and when he does get into proper swing, he is too far behind to be able to make up

what was lost at the beginning. Avoid walking long distances; they rather tend to stiffen the muscles and make them slow. Never miss your race; if you can only get one spin daily, make the most of it. Always run in form—that is to say, as you would in the race, on your toes, with an easy, springing action of the thighs. In the race keep your eyes well on the tape, and never lessen your pace when in front, or let misgivings disturb you when behind; your opponent may have the pace of you and not be able to stay. It is better to be a good second than nowhere. Every race you engage in will increase your experience and give you confidence for the next time. Good time for 100 yards ranges from 11 seconds to 10¼, according to the ground, &c. The top speed is seldom obtained until 40 yards are covered. A good sprinter will generally beat two others in 200 yards, each to run 100 yards with him on end. For sprinting, wind is not such a desideratum as elasticity of muscle. The shorter the distance, the greater care and practice should be made in starting; the longer you have to sprint, the greater will be the necessity for working up the muscles. In practice, run with as slight clothing on as possible; *buff* is to be preferred. The action of the air on the skin keeps up a healthy flow of blood to the surface, and will do more towards a beneficial reduction of weight than any amount of sweatings, baths, or other appliances of the old school.

## QUARTER AND HALF MILE

# RUNNING.

A quarter of a mile is, perhaps, next to the 300 yards, the most patronized of any. Assuming our trainee to be in robust health, the muscles should be gradually accustomed to the exercise by slow spins of half a mile each, two or three times a day, taking about from 3min. to 2min. 25sec., according to the individual, to do it. When the distance is accomplished with comparative ease, practice style and pace for about 300 yards to 350 yards to within about a week of the race, when the whole distance may be run, two or three times at top speed for 400 yards, slower the last 40. Ease up the practice in the last three days, merely working up pace for 100 yards or so. The same method of training will suit the half mile runner, with the exception of his spins being longer, and more attention paid to an equal pace of going. The quarter requires more speed than the half mile; consequently that point must be attended to. A steady, machine-like style of going pays best for the half mile runner.

# ONE MILE RUNNING AND UPWARDS.

In practicing for a mile race and upwards, a long, steady course of slow running must be gone through to get the limbs and the wind gradually accustomed to the work. As they improve, quicken your pace,

and for mile running practice half a mile or so in about 2min. 20sec., until the wind becomes good; then lengthen the daily spins to three-quarters of a mile fast, and the last quarter slowly. Never do much work the last few days, but have a few fast spins of 300 yards or so, to keep the muscles in form. In longer distance training, the same steady practice must be followed, with this exception, that, instead of practicing pace, rather get the condition of wind and muscle up as high as practicable, and reserve your energies for the day of the race.

## HURDLE RACING.

The usual hurdle race distance is 120 yards, with 10 flights of hurdles 3ft. 6in. high and 10 yards apart. This gives a run of 15 yards at both ends. The quickest way of getting over them is by taking them in stride, or technically bucking them. If the ground is firm and level, this can be done, and three strides will take the jumper from hurdle to hurdle, the fourth taking him over. Should the ground be uneven, slippery or heavy, great care is required in bucking them. Touching the top bar will inevitably be followed by a fall or a stumble sufficient to put the jumper out of the race. In bucking, the spring is taken from one leg, and the alight comes on the other; so that the jump, instead of being an actual interruption of the regular strides, as happens when the spring and the alight come on the same leg, is merely an exaggerated stride. The advantage of

bucking is apparent to anyone who has tried both systems under favorable circumstances, and who is strong enough to bear the strain which the high hurdles require. The lower the hurdles are, the greater is the superiority of bucking over jumping. To acquire the art of taking the hurdles in stride, practice over jumps about 2ft. 6in. high, at the proper distance apart, until the style is learnt.



HARRY VAUGHAN, The Famous English Long-distance Walker.



JOHN HUGHES, First Winner O'Leary International Belt.



DAN'L O'LEARY.

# HINTS IN, BEFORE, AND AFTER THE RACE.

In sprinting, a good start is of such importance that we would suggest a careful practice in it. It is a curious fact that a novice will invariably start with one foot a yard or so behind the other, either with the body bent down low, or with the body erect, and swinging the arms as if they were the means of propulsion about to be trusted to. In the former case, he runs one yard more than his distance, in the latter he exhausts and unsteadies himself. Start with both feet within six inches of one another, the weight of the body resting on that foot which is farthest from the scratch, and the toe on the side nearest the goal, just touching the ground, and ready to take the first step over the mark; the body must be kept well up, so that the first spring is taken steadily and in a straight line. As this method is the quickest for getting off the mark, it will apply to every description of pedestrianism.

Before any contest, when you are stripped, take a trot to get the limbs into order and keep them warm; the muscles will be less likely to get strained if well heated beforehand. In running with a chicken-hearted man, race at him, and, if you feel done, fancy that he feels worse. Run as straight to the goal as possible; it is the nearest way home, and therefore the quickest. The arms should be kept well up, and moved in the direction of the course, and not swung across the body. Any scrambling in the race is fatal to a good walker; the motion of his legs should be mechanical. In walking races, if a stitch bothers you, keep well on, and try and forget it; it will never last

long if you are in good condition. In a race with heats, after a heat lie down on your back, and keep the legs raised up, in order that the blood forced into the extremities by the exercise may be assisted by its own gravity to return to the trunk. Rest is the best cure for a strain, and is much assisted by cold water application. In a strain of the internal organs, their complexity renders repair a more difficult operation, as they do not allow of repose; recourse should therefore be had to a physician.

Running on the toes on a path is to be recommended, as enabling a longer stride to be taken, and giving an easier motion to the body, and less jar at each step. In heavy ground, however, it is of little use, as the sinking of the toe in the soil interferes with the spring, and necessitates a larger surface of the foot to get a purchase for the next stride.

Never in practice run with many clothes on; if the weather is cold, clothe in proportion. The action of the air on the skin increases its healthy vigor. A piece of cork is often held in each hand to grasp while running. In a long distance race, rinsing the mouth out with warm tea with a little brandy in it, and munching a crust, will often take away any dryness of throat. Never commence fast sprinting in practice unless the muscles are thoroughly warm. Strains would seldom happen if this was attended to. Fruit fresh picked is not to be discarded. A small quantity, when ripe, will often give tone to the stomach and cool the blood. Of dried fruits, figs are supposed to be the most serviceable.

# TRAINING PRACTICE, FAIR WALKING, ETC.

Walking is the most useful and at the same time most abused branch of athletic sports; not so much from the fault of the pedestrians as from the inability or want of courage of the judge or referee to stop the man who, in his eagerness for fame or determination to gain money anyhow, may trespass upon fair walking, and run. Walking is a succession of steps, not leaps, and with one foot always on the ground. The term “fair toe and heel” was meant to infer that, as the foot of the back leg left the ground, and before the toes had been lifted, the heel of the foremost-foot should be on the ground. Even this apparently simple rule is broken almost daily, in consequence of the pedestrian performing with a bent and loose knee, in which case the swing of his whole frame when going at any pace will invariably bring both feet off the ground at the same time; and although he is going heel and toe, he is not taking the required succession of steps, but is infringing the great and principal one, of one foot being continually on the ground. The same fault will be brought on by the pedestrian leaning forward with his body, and thereby leaning his weight on the front foot, which, when any great pace is intended, or the performer begins to be fatigued, first merges into a very short stride, and then into a most undignified trot. There is no finer sight among the long catalogue of athletic sports, more exhilarating and amusing to the true sportsman, than to see a walking-match carried out to the strict letter of the meaning, each moving with the grandest action of which the human frame is

capable, at a pace which the feeble frame and mind is totally unable to comprehend, and must be witnessed to be believed. To be a good and fair walker, according to the recognized rule among the modern school, the attitude should be upright, or nearly so, with the shoulders well back, and the arms, when in motion, held well up in a bent position, and at every stride swing with the movement of the legs, well across the chest, which should be well thrown out. The loins should be slack, to give plenty of freedom to the hips, and the leg perfectly straight, thrown out from the hip boldly, directly in front of the body, and allowed to reach the ground with the heel being decidedly the first portion of the foot to meet it. The movement of the arms, as above directed, will keep the balance of the body, and bring the other leg from the ground, when, the same conduct being pursued, the tyro will have accomplished the principal and most difficult portion of his rudiments. This will in a very short time become natural to him, and the difficulty will be the infringement of the correct manner. The novice having learned how to walk, and being matched, requires training, which must be under the same rules as have been laid down previously, with the difference, however, that his sweats must be taken at his best walking-pace, the trot by all means being totally barred. A continued perseverance in the practice of this rule will enable the pedestrian to persevere, notwithstanding all the shin-aches, stitches, and other pains attendant on the proper training for a walking-match, and which every man must undergo before he can be considered worthy of being looked upon as a fast and fair walker. The tyro must not be discouraged with his first feeble and uncertain attempts if they should not come up to his

crude anticipations, but bear in mind that, although the accomplished pedestrian goes through his apportioned task with great apparent ease, he has gone through the rudiments, and that nothing but great practice has enabled him to perform the apparent impossibilities which are successfully overcome almost daily. Therefore the young walker must take for his motto “Perseverance,” and act up to the same by continued practice. The man training for a match should walk some portion of his distance, if weather permits, daily, in his walking-dress, which should consist of a light elastic shirt, short drawers, and light Oxford ties. On starting, he must go off at his *very* best pace, and continue it for at least three hundred yards or a quarter of a mile, by which time he will have begun to blow very freely, and then, getting into a good, long, regular stride, his principal aim must be to keep his legs well in advance of his body.

The rule of getting away fast in trials should be invariably carried out; it prepares the man for a sharp tussle with his opponent for the lead, and will hinder him being taken off his legs in the match. When tired he can also ease his exertions; but if he is in the habit of going off at a steady gait, in the generality of instances he is virtually defeated in a match before he has commenced racing. Moreover, he must, when undergoing distress from the pace he has been doing, never by any chance cease his resolute and ding-dong action; for distress, if once given way to by easing, will of course leave the sufferer, but at the same time all speed has also departed, and not for a short space of time either, but sufficiently long for the gamer man, who would not succumb to the inevitable result of continued

severe exertion, to obtain such an advantage as would be irrecoverable, as well as to conquer the aches and pains which invariably leave the well-trained pedestrian when the circulation and respiration become equalized—"second wind" it is better known by. After this happy and enviable stage of affairs has been reached the work becomes mechanical, and the pedestrian from time to time is enabled to put on spurts and dashed that would astonish himself at any other time when not up to thorough concert pitch. The recovery from these electrifying dashes is almost instantaneous, and the pedestrian keeps on his satisfactory career until sheer fatigue gradually diminishes his speed, although none of the previous aches and pains are present. The trainer must not forget the previously-mentioned rule of stopping the man when good time is not the result of his best and hardest exertions, as that bad time proves unerringly that something must be amiss which requires looking to thoroughly. As well might the engineer of a locomotive, on finding out that some of the internal works of his engine were out of gear, put on all his steam, and then wonder at the machinery being out of order at a future time of trial.

One word more. Let the man continually bear in mind that "it is the pace that kills," and that slow walking never made a fast race or fast man; let him practice at his best pace, which will daily improve. The commencement of fast work will most likely bring on pain of the shins, which will be sore after the exertion has been discontinued, as well as other portions of the frame being in the same predicament. Hand-rubbing with a stimulating embrocation (of which the recipe is appended) before a good fire will in most instances be all that is required; but if

obstinate, a hot bath will insure the removal of all the obstinate twitches, etc. The shoes for match-walking should be of the lightest description commensurate with strength for the distance required. They should be of sufficient width and length to give the muscles and tendons of the foot full play, without being in the slightest degree cramped. They should be laced up the front, and care taken that the lace is sound and new. So much importance is attached to this, that stout wax-ends are now invariably in use. Some advocate the use of boots; but, although stated to be useful if there is any weakness of the ankle—a pedestrian with weak ankles!—is there no cold water?—the heat generated by them would certainly counterbalance the supposed benefit; and there is the difference in the weight, which would tell at the finish of a long match.

## HIGH JUMPING.

Begin by gentle runs of about three hundred yards, with a few low jumps, say ten, about three feet high. Practice over these jumps for a few days until the stiffness of the muscles wears off, and then gradually raise them to four feet or four feet six inches. If this height cannot be cleared easily, place the jumps at the most suitable height. Care must be taken to do them quickly and neatly. The run between may be slow, but the jumps should always be taken with a quick spring, landing on both feet every time. If this

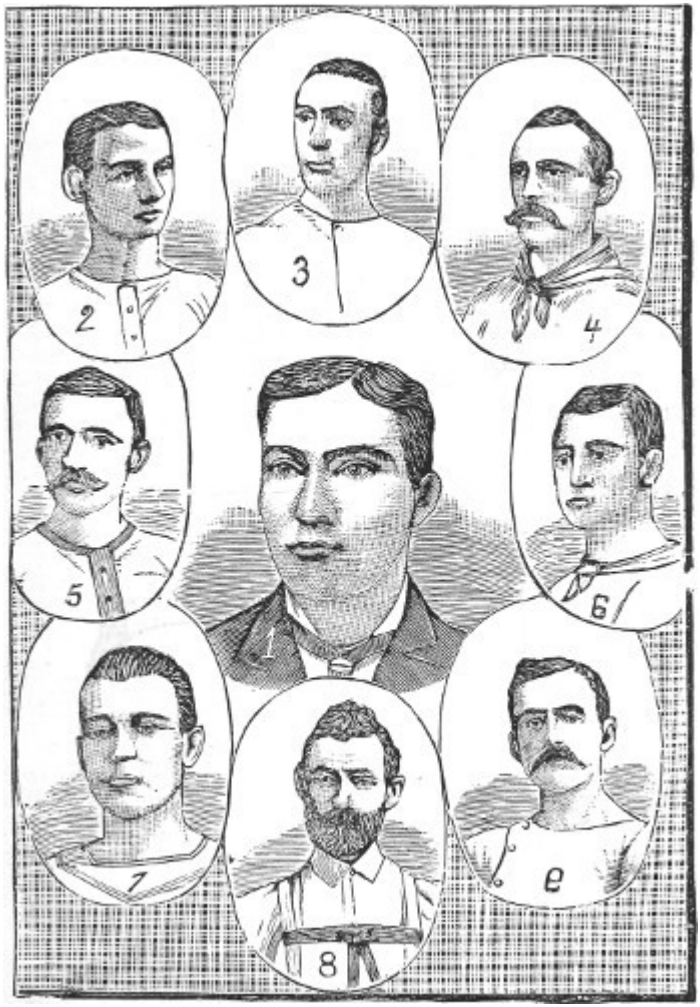
*modus operandi* is paid attention to, the muscles will soon become accustomed to the sharp contraction required, and the legs will, by keeping them well together over low jumps and alighting on both feet, lose their tendency to straddle when a higher jump than usual is attempted.

Some, when in practice for high jumps, strengthen their muscles by standing on one leg and lowering the body down until the hams touch the heels, and then raising themselves up gradually again. This action, however much it may be beneficial to the sinews, cannot but give them a tendency to be slow, which should be avoided as much as possible. A heavy coat, with a weight in both pockets, is of some service to those athletes stripped and ready to compete, as a great sense of lightness and elasticity is imparted to the frame on its removal. The heavy coat should never be worn except in the few minutes preceding the trial, as by constant use the good effects wear off. Always have a soft place to alight upon, as it not only eases the jar of the jump, but gives a jumper more confidence when he feels secure from the chances of a twist of the ankles on touching the ground. Hard turf, with very fine ashes rolled in until the surface is quite level, makes the best fair taking-off place both for high and broad jumping.

## BROAD JUMPING.

Begin with a few jumps about twelve feet or so,

taking your run for them slowly, starting about twenty yards off and quickening in the last few strides. The great object to be guarded against is taking off to far from the mark, or getting out of step in the run; this can only be obviated by practicing at a certain distance until the necessary swing of the last few strides is acquired. The run to the jump cannot be too fast; in the air the legs should be raised as in going over a high jump, and thrown as far forward on landing as can be done with both heels close together. No fear need be entertained of falling back on alighting if the run is sufficiently fast and the landing place level and soft; the impetus derived from the run gives the heaviest part of the jumper, the trunk, sufficient momentum to carry itself forward when the progress of the feet and legs is arrested. The landing place should be soft to the depth of eight inches, and sufficiently binding to show the marks of the heels clearly on alighting; clay and mould mixed make the best landing ground. A soft place to jump on will prevent any jar to the knees, and will give the jumper more confidence. The concussion caused by landing on hard ground may sometimes cause a serious accident.




SIX-DAY PEDESTRIANS.

1. J. Dobler, 2. S. Merritt, 3. Geo. Hazael,
4. F. Khrone, 5. P. J. Panchott, 6. Wm. Dutcher,
7. Nick Murphy, 8. Norman Taylor, 9. George Guyon.



W. GIBB, Who ran ten miles in 54min, 49sec.,
London, England.

# HAMMER THROWING.

The muscles of the loins and back are the ones principally brought into play in hammer throwing, and by their development they become extremely serviceable in assisting the spine to bear the upper portions of the body. The practice of this kind of exercise must, therefore, be beneficial to those whose lungs and heart are too delicate to stand any of those sports, such as rowing, running, etc., which so particularly tax their working powers. Commence practicing with a hammer about 7lb., until the art of swinging while running is acquired; to learn this the run should be taken at first only six or seven yards from the scratch; before the run swing the hammer well, like a pendulum, in the direction of the mark two or three times, until it has acquired a good momentum, and then start, taking, at the first few attempts, one turn only in the run; afterwards, as the practice becomes easier, two turns can be made, and the runs lengthened in proportion. Some athletes, however, take three or four turns, but, as a rule, two will be found sufficient. Between the turns, run as far towards the scratch as possible, taking long, even strides to acquire a good impetus, and keeping up the centrifugal force of the hammer by swinging it well round low, and in a plane at right angles to the body. The arms should be kept quite straight the whole time, merely acting as if they were a prolongation of the handle. The work is done by the muscles of the back and loins, and in delivering the hammer at the scratch the athlete should, above all things, bear in mind that he does not lift it as if lifting to leg. The “devil” must be put into the swing as the hammer descends in the last half of the turn,

so that the force has culminated by the time the hammer is crossing the line parallel to the scratch, where it must be let go, the body at the same moment being thrown back to counteract the impetus of the swing. The hammer should describe a curve at its highest point of not more than 11 or 12 feet from the ground. Avoid pulling at the handle in the run, and increase the pace and swing at each successive turn. The farthest throw of the 11lb. hammer, 3 feet handle, on record, is 176 feet. The 22lb. hammer has been thrown over 94 feet.

## PUTTING THE STONE.

Balance the body on the right leg, the left side turned towards the scratch, the right foot being placed as near the seven-foot mark as possible, and the right hand balancing the weight, with the knuckles close to the shoulder; raise the weight up to the full stretch of the arm two or three times, till the muscles get into play, still keeping the weight of the body thrown on to the right leg, the left foot touching the ground slightly; when the balance of the body is obtained, hop three feet towards the mark, and then spring up sharply to the scratch line, throwing the weight away at the same moment, and bringing the right leg down, with the toe touching the scratch line and the right side of the body to the mark. By this means the follow of the body after the weight is prevented, and, by bringing the right leg forward at the moment of throwing, the whole force of the thighs are brought

into play, and the muscles of the loins assist in the sudden turn of the body from left to right. The weight must be held on the lowest joints of the fingers and the palm of the hand, the wrist being kept as stiff as possible, and all tendency to throw it as a ball avoided. A heave is not so effective as a quick jump, with the muscles concentrated at the same moment. The quicker the hop and the throw are made, the further the distance put, provided that the balance is not lost. Any delay between the first hop and the final spring is fatal. In delivering the weight, let it be put upwards—that is to say, aim to hit an object about fourteen feet above the spot where the weight will pitch. The further the weight has to be put, the higher must be the elevation. No exercise is a greater proof of strength than this. Very little skill is required; and when once the way of putting is learnt, it seldom happens that a strong man gets beaten by the knack of a weaker antagonist.

The ankle is the part most likely to suffer, from the fact of having to spring with the whole of the body, and the addition of the weight. To practice, a cricket ball may be used instead of a heavy weight, and the spring made as before, with the delivery of the ball. After a little practice, a heavier weight may be tried until the one required can be put properly. The best “puts” on record are for the 22lb. weight over 36 feet, and for the 16lb. over 41 feet.

# TRAINING FOR ROWING, ETC.

The present work is not intended for the guidance of professional oarsmen, or those who may row for large stakes, and who, when matched, leave their usual occupations and devote their energies to the better observance of the stricter rules of training. Such men invariably have a mentor worthy of following, and whose knowledge of right and wrong will lead them to success or otherwise, as the fates may dispose. The amateur, however, must be treated more gently and with more attention than the sturdier and hardier professional, or those who may have made the river and adjuncts their capital in their struggle through the world for a subsistence. The amateur, when he has an engagement before him, should take into consideration the time he has allowed him to train, and the mode of proceeding will depend in a great measure on the condition and previous habits of the man engaged. If a man is fleshy and of a full habit of body, a dose or two of mild purgative medicine should be taken, and slow walking exercise only taken on the day the doses have been administered. After the medicine has done its duty, if the amateur is very fleshy, a Turkish bath or two may be taken with advantage, the usual precautions against cold being used. The subject, after one or two of these sweats, is prepared for more arduous work, which may be taken at a fair pace in the form of good sharp runs and fast walks, which, like all other trainings, will become easier of accomplishment at each repetition.

The above work, with rowing exercise, will infallibly bring the practitioner, if continued for any time, into a proper condition to contend with confidence and

success in any rowing contest.

He must rise at five in the summer, and after his bath (cold), and having been well rubbed down, a good sharp walk of about a mile out and a rattling spin taken by running home, when another good rub will be rendered imperative Should the run not be taken, a row of a couple of miles at three parts speed must be accomplished. When thoroughly cooled down, breakfast should be taken, which should consist of good wholesome meat (either broiled mutton-chops or steak, with no seasoning), stale bread or toast, and tea. When dinner can be taken at mid-day, say about one P. M., it is better, and should consist, like the breakfast, of good wholesome roast meat, with no vegetable except a mealy potato, stale bread, and not more than a pint of really good sound ale (old, if palatable to the drinker, the best); some prefer sherry, but, although agreeing with a few, the ale, as a rule, is more strengthening and wholesome. The row should be taken before tea, which should then be of the same viands and liquids as the breakfast. The above rules, of course, are open to alteration, according to circumstances, and the diet varied successfully by the introduction of fowls, either roast or boiled—the latter preferred—and when there is any indication of training off, a small portion of green-meat, in the shape of sound cabbage or any fresh vegetable in season. The last food before retiring to rest should be either about half a-pint of thin gruel or a glass of ale with dry toast. The other portion of the day's training must be left to circumstances; but it must never be lost sight of that sharp work, regularity and cleanliness are the chief if not the only rules to be followed to produce thorough good condition. The use of the bath should

never by any chance be missed. Nothing is more injurious to the wind, etc., than hard rowing on a full stomach, the ill effects of which, although scarcely felt at the time, have at a more remote time, in many instances, proved to be the germ of serious disorders.

In rowing, the legs, loins, trunk, arms, hands, the digestive organs and the lungs are made to perform their regular and legitimate functions simultaneously, and the danger of building up one part of the system at the expense of another thereby avoided, and to the recognition of these facts is ascribed the popularity of aquatic sports here and abroad. But it is not always convenient for large numbers of our people to indulge in this healthful pastime; the expense of owning and keeping a boat, the difficulty of reaching an acceptable place for rowing, no less than the dangers incident to inexperienced oarsmen upon the water, are drawbacks which can only be met by the substitution of a machine giving all the advantages without the disagreeable accessories; to this end several machines have been introduced to public notice, but none have filled all the requirements until by careful observation of the defects of former attempts the Eureka Parlor Rowing Machine was introduced, which gives an exact and perfect imitation of rowing. It teaches to feather the oar correctly, it gives the dip of the oar, it has the sliding seat, it can be regulated for heavy or light, short or long stroke, and is manufactured for either open or cross-handed rowing, and the pressure can be changed to suit the weak or the strong.

## MORE INFORMATION ABOUT TRAINING

## FOR ROWING.

For the further information of those who cannot have too much of a good thing as to the preparation for rowing a race, we subjoin the latest ideas of modern authorities upon the subject.

## JOSH WARD'S SYSTEM OF TRAINING.

The following rules, from the pen of Josh Ward, ex-champion sculler and captain of the Ward crew, which among their other achievements won the International four-oared race at Saratoga in 1871, will be first-class authority:

First, be sure that the men are in perfect health, so that they will be able to stand the work which they are about to commence.

A mild medicine is usually required to cleanse the blood, as, unless the blood is in good order, and in very many cases it is in any other condition than a good one, the food taken will not digest well.

Upon getting up in the morning take a sponge bath, dry well with a coarse towel, after which walk about two miles before breakfast.

Breakfast should consist of a good tender porterhouse steak, broiled rare, and thoroughly masticated before swallowing. As a drink, a cup of black tea. Drink no more than absolutely necessary either at meals or any other time.

After breakfast, eaten slowly, no exercise should be taken for about an hour; at the expiration of which

time, the crew can get in the boat and row the same distance expected to be rowed in the race, and at a good pace.

After returning from the row, a rub down and then a moderate walk, until shortly before dinnertime. Dinner should consist of roast beef or broiled chicken, with soft boiled eggs, etc.

If any drink is taken, tea or water, in moderate quantity, should be used. After dinner no exercise for about two hours, when the crew take the afternoon pull, which should be over about the same distance and at the same pace as that of the morning.

After coming ashore, rub down as in the morning, with a coarse towel, and then take a moderate walk, returning home about an hour before supper, which, when eaten at all, should be a light one, composed of a little broiled meat, with a piece of dry toast and a cup of tea.

Two meals, at the least, should always be taken; and where only two are taken, they should, in all cases, be what is known as breakfast and dinner, as both these meals, or rather either of them, are more essential to the man in training than supper, particularly if he, as I would advise him to do, rises with the sun and retires at about nine o'clock, or half-past, in the evening.

After a night's sleep, and after having left the bed at five in the morning and walked or ran two, three or four miles, as well as taking a bath, the system is generally quite importunate for sustenance by seven o'clock or half-past.

This is not always the case, however, in regard to supper; as, after having eaten a hearty dinner, at 1 o'clock, without any other exercise thereafter than the afternoon row, a man with very little practice can accustom himself to doing without more food until the following morning, if he retire at about nine o'clock.

Up with the sun in the morning and pursue the regular plan of bath, walk, etc., unless stormy, in which case exercise indoors should be substituted for the walk.

The dumbells and clubs are proper implements to use for this purpose, and every man in training, whether amateur or professional, should have one or other, or both.

The man in training should always have plenty of exercise given him at regular and proper intervals. By plenty of exercise I mean just enough, neither too much nor too little; and to be able to tell just when a man has just enough belongs only to those who have had an extensive experience in preparing men for aquatic or other contests.

His habits must, of necessity, be very regular, otherwise the course which he is pursuing will result in very little good.



CELEBRATED FEMALE PEDESTRIANS.

1. Cora Cushing. 2. Mary Marshall. 3. Exilda La Chapelle.
4. Fanny Edwards. 5. Bertha Von Berg. 6. Fanny Rich.
7. Bella Kilbury. 8. Madame Tobias. 9. Madame Franklin.



MADAME ANDERSON, the great 2,700 Quarter-mile Walker.

In regard to the oars which myself and brothers—the Ward crew—generally use, they are sweeps, about twelve feet long and five inches wide. A boat for our crew of four would be forty-six feet long and twenty

inches wide. In pulling we use the legs, and in a four or six-oared boat pull forty and forty-two strokes per minute. In pulling a pair of sculls, I pull about thirty-eight strokes to the minute, and use the legs.

We used spoon oars, and our boats were constructed with the stroke on the starboard side.

In sculling, I have always pulled open-handed, but I think cross-handed is the better style.

To make a successful rower great practice will be required, although in this, as in everything else, some learn much more rapidly than others.

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Benjamin F. Brady, ex-president of the Amateur Rowing Association, furnishes the subjoined:

Coxswains are carried in the gigs and barges only; all the shells being constructed to dispense with them, and it is safe to predict that they will soon come to be a thing of the past in all American shell races. Whether with or without a coxswain is the more practical or scientific, depends, in a great measure, upon the nature of the course pulled, and the efficiency of the bow oar; but an experienced crew can well get along without one. While the fact has been several times proven that a good coxswain has been the means of winning a race with an acknowledged inferior crew.

## COXSWAIN'S ORDERS

Among the Clubs of the Association, are given as follows:

1st. “Oars.”—The crew raising their oars to an angle of forty-five degrees and then placing them in the thole pins.

2d. “Out.”—The crew running their oars out to the proper distance for rowing, the blade being parallel with the gunwale of the boat.

3d. “Give-way.”—At the word “Give” throwing the handle of the oar forward well over the toes, the blade being at a proper angle to strike the water; and at the word “Way” dipping the oar in the commencement of the pull.

4th. “Weigh.”—To stop rowing.

5th. “Weigh-starboard,” or “Weigh-port.” To turn right or left.

6th. “Easy-all.”—To slacken speed.

7th. “Oars-apeak.”—To salute when at rest. The oars to be raised perpendicularly, the handles resting on the floor, and the blades running fore and aft.

8th. “Weigh-across,” “Apeak.” To salute when under headway. Running the oars across both gunwales.

9th. “Let-fall.”—To regain former position. At the word “Let,” raising the oar about four inches, and at the word “Fall,” throwing it into the thole-pins, the blade “first” touching the water.

10th. “Across-ship.”—To get the oars in the boat. At the word “Ship,” raising the oar at a distance to clear

the heads of the crew, and dropping it lightly in the centre of the boat.

11th. “Trail-oars.”—In passing through bridges, culverts, etc., unshipping the oar and trailing it at the side of the boat.

12th. “Recover-oars.”—To regain former position.

The number of strokes pulled by the association crews it would be impossible to designate, with any degree of accuracy, as all rowers have their own peculiar styles; and in many cases a man, or a crew, may start at the rate of thirty-six to the minute and increase to forty, and finish at, or near, thirty-two. In practicing a crew, a “pull,” and “tire out,” is certainly detrimental to proper training, as a crew should “never” be over-worked.

The mode of dipping the oar among the association crews is, as a general rule, to immerse about one-half the blade; row with the back straight, elbows well at the sides.

## STEPHEN ROBERTS’ SYSTEM.

In training a crew for a race, the habits and mode of living of a man are to be consulted more than any set of rules. If he is used to eating meat well cooked, it will not do to give him meat cooked rare, as this is apt to produce a looseness in his bowels. A man must eat according to the state of his system, and if he trains hard, eats meat, and is troubled with loose bowels, he should train light and live on toast, bread, and coffee or tea, for a few days, with puddings, or bread and milk; and if he is used to drinking, good

fresh ale will not hurt him, but no liquor stronger than porter or ale should be used. On the other hand, if costiveness is present, no longer than forty-eight hours should be permitted to elapse without a motion, and this should be brought about, if possible, by making use of the suitable food and drink; such, for instance, as the veal steaks cooked rare, with cider or water as a drink.

The main thing, in training a man or crew, is to give him or them plenty of the same kind of work performed in the race. Be careful, however, not to put on too much at first. If a mile race is to be pulled, twenty days' training will be required.

The first day, row, say one mile; the second and third day, about the same, or a little more, not too hard. After this, increase the distance half a mile every day, until five miles are gone over at each row. Then, if there are no blisters on the hands, row the whole distance at racing pace. Every other day, row eight or ten miles, up to within twenty-four hours of the race. Less rowing than this should not be taken; more will not hurt.

Clerks, bookkeepers, etc., generally require two weeks more of training than men who have been always used to heavy lifting; but, when a man once does get into good training, his race becomes an easy matter for him.

## THE HARVARD SYSTEM.

Broiled steak or chops, potatoes in almost any style, without grease, bread nearly fresh, tea if desired, water, or milk if preferred, oatmeal porridge or

gruel, and eggs poached or boiled—not very hard—render the breakfast of a Harvard student in training palatable and even attractive.

The best roast beef or mutton procurable, potatoes, bread, cracked wheat, rice, oatmeal gruel, and the various vegetables in the market, often, if not regularly, make the dinner inviting; and a piece of salmon or a dish of poultry or game is an occasional visitor, aiding to vary yet more the programme. Tapioco, farina and other vegetable puddings make an admirable substitute for heavy puddings as a desert. Milk, water, and tea again, and also butter and salt, in reasonable quantities, are permitted.

Bread and milk, or tea, butter, oatmeal gruel, dry toast and crackers, are the chief and often only articles taken at supper.

About a half hour's careful rowing at a tolerable pace, with an occasional stop or "easy," for instruction and rest, in the morning.

In the afternoon, an hour's rowing, with not more than two or three rests, will complete the day's water work.

The rate of speed in the afternoon should go up from thirty-five strokes a minute when commencing training to racing gait during the last two weeks, and pulling over the proposed course once "on time" will be plenty of work for this last period.

A three or four mile walk, at a four-mile gait, starting an hour after breakfast, will not, unless in extremely hot weather, prove too much for a vigorous young man with ordinarily good legs. The speed of this

walk should be reached gradually, and after, perhaps, if a man in the start is much out of condition, say two weeks slower going.

A thorough rubbing of the entire body, until the skin is absolutely red, should "immediately" follow each row, and then a dry suit should be donned. Flannel is the best material for it.

Eight hours should seem a good medium for sleep. If a man feels all right with a less amount than this, he should regulate his own hours; but if he is nervous and excitable, he should have more. He should never lie abed awake in the morning, but spring up at once, and take his sponge bath, or in warm weather, if convenient, a plunge into cold water.

## HARRY CLASPER'S SYSTEM.

Rise between 6 and 7 A. M., walk four or five miles. Breakfast at 8 A. M.—Chop or couple of eggs, bread, tea, Rest for half an hour, and then a brisk walk or run. If morning exercise has not been heavy, a row, terminating about 11 A. M. Dinner at 12 M.—Beef or mutton, broiled; egg-pudding, with currants in it if desired, or other light farinaceous pudding; old ale, one glass; wine, one glass, (port); or ale, two glasses, without wine. Rest for an hour, and then on the river again for a hard row. "Rowing exercise should be taken twice every day." Tea, with toasted bread sparingly buttered, with one egg only—more has a tendency to choke the system. Supper, not recommended. When taken, to consist of new milk and bread, or gruel, with raisins and currants and a glass of port wine in it. Bed about 10 P. M. *Summary*:

sleep, between eight and nine hours; exercise, walking and rowing about four or five hours; diet, limited.

## CHARLES WESTHALL'S SYSTEM.

Rise at 6 A. M. or earlier in the summer; cold bath and rub down; sharp walk about a mile out, and run home; or a row of a couple of miles at three-parts speed; a dry rub down. Breakfast at 8 A.M.—Mutton chop or steak, broiled; stale bread or toast, tea, half a pint. Dinner at 2 P. M.—Meat as at breakfast with a mealy potato, stale bread, old ale, one pint. Rowing. If dinner be late, luncheon to be taken, to consist of beef or mutton, hot or cold; bread, old ale, one glass. If dinner be early, "tea with viands and liquids as at breakfast" to be taken. Supper—Half a pint of thin gruel, or dry toast and a glass of old ale. That the above rules are of course open to alteration according to circumstances, and the diet varied successfully by the introduction of fowls, either roast or boiled—the latter preferred; and it must never be lost sight of that sharp work, regularity and cleanliness are the chief if not the only rules to be followed to produce thorough good condition. *Summary*: sleep, about eight hours; exercise, four or five hours; diet, limited.

## H. F. WALSH'S, OR STONEHENGE'S SYSTEM.

Rise at 8 A. M. According to season and weather, cold bath. Exercise, 8.30 to 9 A. M.—Let all take a gentle run or smart walk. In most instances a smart run of

three miles will be about the best distance.

Breakfast; 9 to 9.30 A. M.—Oatmeal porridge, with beef or mutton broiled, and bread; tea or coffee, or old ale, one pint. Tea is preferred to coffee. Cocoa is too greasy.

Exercise, 9.30 to 11.30 A. M.—Billiards, skittles, quoits, or other light exercise. 11.30 A. M. to 1.30 P. M.—Rowing. 1.30 to about 2.30 P. M.—Running, rubbed dry and linen changed.

Dinner, 2.30 to 3 or 3.30 P. M.—Beef (roast) or mutton, (boiled mutton occasionally), roast fowl, partridges, or pheasants (allowed), or venison (nothing better); bread, puddings occasionally, made of bread, eggs, and milk, and served with preserved fruits. Vegetables—Potatoes (one or two only), cauliflowers and broccoli (only as an occasional change). Old ale, from a pint to a pint and a half; wine, a glass or two, port or sherry. After dinner, until 5 or 6 P. M., a gentle stroll. Rowing 6 to 7 P. M.

Supper, 8 P. M.—Oatmeal porridge, with dry toast, or chop, with glass of port. Bed at 9 or 10 P. M.

*Summary*: sleep, ten or eleven hours; exercise, say four hours (exclusive of billiards, etc.); diet, varied.

## WINGATE'S SYSTEM FOR A MONTH'S TRAINING.

Rise at about 7 A. M. (Glass of cold water recommended). The crew meet at 7 A. M., walk and run for four or five miles; or, in later practice, quick run of two miles. Wash and dress.

Breakfast, 9 A. M.—Meat (broiled), bread (brown) and butter, tea, two cups. Cocoa made of the nibs boiled for four hours is better than tea for breakfast.

Luncheon at 1 P. M.—Beef sandwich, with half a pint of old ale, or biscuit and glass of sherry, or egg in sherry. At 2.30 P. M. row about four or five miles. This altogether depends on the state of the crew.

Dinner at 6 P. M.—Wash in tepid water. Meat (roast, broiled or boiled). Vegetables—"The green foods permissible contain in their list spinach—the very best of all; sea-kale, asparagus, but without melted butter; turnip-tops, young unhearted greens, but not solid cabbages; broccoli, carrots, parsnips, and cooked celery. Turnips are also favored, and peas condemned, also cucumbers, and all salad mixtures. But boiled beet-root is good, and Jerusalem artichokes; and French beans stand next to spinach in virtue." "Any kind of wholesome meat thoroughly cooked." The course is varied daily, so that no two days together shall see the same articles on the table. "Light puddings may be eaten." Old ale, one pint. Wine, two glasses of old port or sherry, or three of claret. Biscuits and dried fruits, as cherries, figs, etc., allowed. "All fresh fruits are avoided. Plain jellies are innocuous. As much spring water as they have a mind to."

Supper, 9 P. M.—Oatmeal gruel, if desired. Bed at 10 P. M.

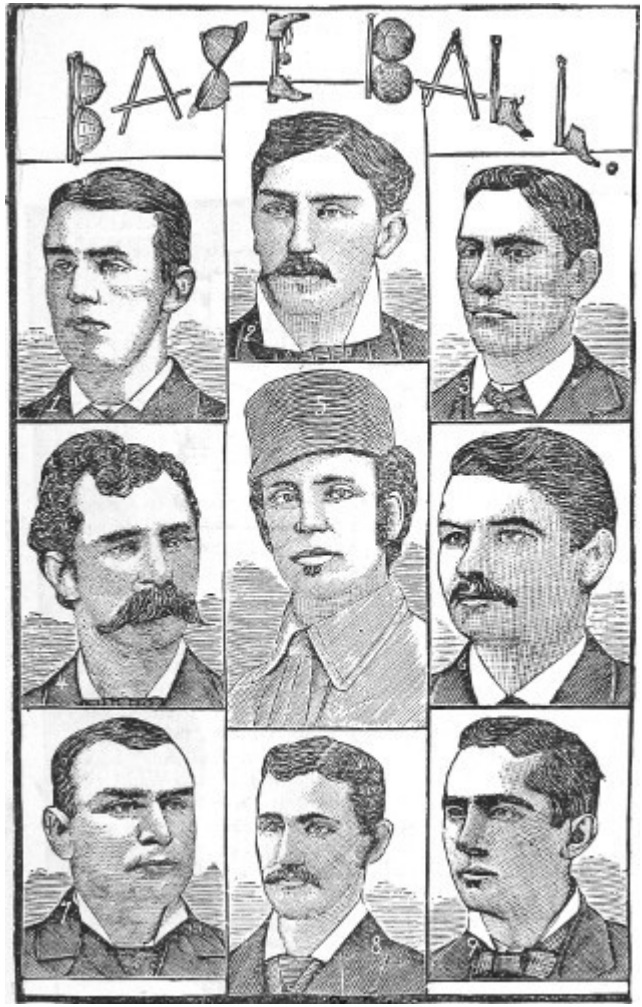
*Summary*: sleep, eight or nine hours; exercise, about three hours; diet, varied.

# TRAINING FOR LONG-DISTANCE GO-AS-YOU-PLEASE CONTESTS.

About the first recognized legitimate contest of this kind was originated by Sir John Astley, a Crimean veteran and general athlete, giving a valuable gold and silver belt, open to the world, to the one who should cover the greatest distance, in whatever way he chose, unassisted, on his legs, for a period of six days. Long distance feats were not in themselves new, by any means, Capt. Barclay, Foster Powell, George Wilson, and others in auld lang syne figured conspicuously in England and Scotland, their journeys being traveled out of doors, on the roads, similar to the long walks of Weston, Sergeant Bates, Wm. Gale, and others. The athletic mania, which had lain dormant for so many years, was suddenly revived in this country, and spread like an epidemic far and wide, bringing with it a healthy reaction. The saloons and viler resorts began to lose caste for the running and walking match. Street cars and stages, and elevated railways complained of lack of patronage on fine days, as old and young, rich and poor, fell into the walking rage, and amateur spurts from home to place of business and *vice versa* became visible on every few blocks. Even the working girls caught the health imparting habit, and stepped out as jauntily and with as much snap as your La Chappelle or Fannie Edwards. Dailies, weeklies and monthlies saw increased interest and patronage by devoting space to athletics, while Beecher, Talmage, Moody, and other lesser lights mixed athletics up with their dogmas, until at the present time it is the fashion, and with us style is everything. True,

druggists, doctors and undertakers found their business falling off, but we are candid enough to admit feeling pleased at this state of things, as, from being looked upon as a nation of tobacco-chewing, nervous, dried-up, money worshipers, experience has proved that Americans now, instead of following, take the lead in everything worth speaking about.

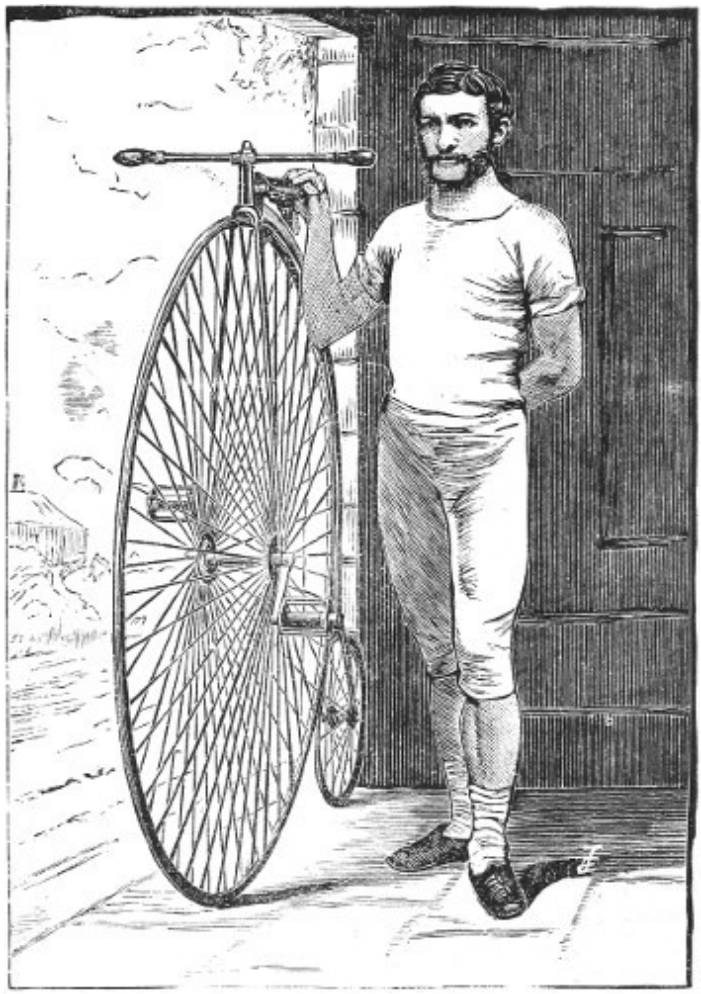
## BASE BALL.




CELEBRITIES.

| | | |
|---|---|---|
| 1. J. M. Ward, Pitcher. | 2. Ed. N. Williamson, 3d Base. | 3. Fred. Dunlap, 2d Base. |
| 4. Jas. O'Rourke, Right-field. | 5. Geo. Wright, Short-stop. | 6. P. A. Hines, Centre-field. |

| | | |
|---|---|---|
| 7. Joe Start, 1st Base. | 8. Chas. N. Snyder, Catcher. | 9. Joseph Hornung, Left-field. |



LLEWELLYN H. JOHNSON,

The Distinguished Amateur American Champion Bicyclist.

It is not every boy or man who will make a Rowell, an O'Leary, a Blower Brown, a Frank Hart, or whoever happens to be the head of the class when this meets the reader's eye—neither must a young lady expect to become a Madame Anderson, a May Marshall, or a Von Berg. Both sexes can, if they have the will, in time, accomplish what now seems an utter impossibility. Does any one suppose that Daniel O'Leary walked his square heel-and-toe contests, Madame Anderson her great accomplishments, Captain Webb his swimming across the English Channel, Ed. Hanlan conquering all the world as an oarsman, by saying "I can't," and making no further effort? To become adept at anything, perseverance is the keystone, as "Little by little great oaks from small acorns grow," and constant dripping even wears stones away, so that "if at first you don't succeed, try, try, try again." If necessary, commence by walking only a block at a time, Madame Anderson used to tell her lady admirers, increasing to two, four, eight, and so on, doubling and doubling until it will be found as easy to go miles as it was before the length of a single row of houses. Youth is the best time for practice, and the smallest, sickliest looking boy or girl will, with one or two companions, manage to cover an amount of ground that would make ordinary grown-up people very much inclined to doubt, and very loth to attempt. The youth has ambition in this direction, not having yet got into politics, money worshiping or being addicted to chewing, smoking, drinking, etc., which to many men are considered absolutely necessary. A party of boys with jackets on their arms will walk and run

eight or ten miles, on a Fourth of July day, cutting up, prattling away, whistling or singing, with no other refreshment than a little water or fruit. They fix upon a certain place to go to, may be an orchard, or to hunt bird's nests, or to a place to swim, row or fish, and get there, whereas a man or party of men, unless conveyed straight to the spot, would probably consume half a dozen lagers at least, and smoke as many bad cigars, pipesfull of strong tobacco, or chew a paper of so-called solace. We have tried both, and found out we could travel twice the distance on a few oranges or a mouthful or two of spring water, a biscuit or sandwich, than all the lager or tobacco taken in our life.

Presuming the individual to be in good health, the walks, trots, or runs must be gradual at first, and increased daily, not exactly in the order laid down in previous chapters, for the six-day business is more a trial of endurance than speed. It is not necessary to measure the distance between meals, but keep on the go until pretty well tired, rest at intervals, then buckle to again. The "Rowell trot" won him the belt and drew a $50,000 gate, his share the first time he came to New York, after all expenses being over $20,000. It has been proved beyond all argument that trotting or running beats walking, and when once acquired the dog trot will come as easy to a man (if not easier) as a fast walking gait. In practicing long-distance running, style is nothing—wind and freshness everything—let your arms, therefore, swing easy which ever way comes most natural, as the legs are the motors for this kind of work. Neither attempt long or short strides, no matter what your gait, clumsy or otherwise, for it is the distance to be got over that will land you a

winner, not your shape or traveling on your “pretty,” however people may criticise. An old car-horse will keep up the same jog-trot nearly all day apparently undistressed, while a terrible three-mile dash at full speed will perhaps use the fast horse up. It was not natural for the car-horse to go that gait at first, but he was broke to it, and men are pretty much like horses in this respect, except that they can endure more in the long run. You will doubtless have “bellows to mend,” stitches in your side, etc., but stick it out and they will not come again probably twice the same day. A short stick, easy-fitting clothes, light head cover, well-seasoned and easy fitting laced-up shoes, seamless, woolen stockings, and a cheerful companion are all necessary. If troubled with sore feet the pedestrian should follow Dr. Parks’ advice to the British Army, viz.: Before setting out dip the feet for a minute or two in very hot water, wipe them quite dry, and then rub them with soap (soft soap is best) till there is a good lather; then put on the stockings. If, notwithstanding, they are yet foot-sore, at the end of the day wipe the feet with a damp cloth, and rub them with a mixture of tallow and spirits of wine. Besides this, great attention should be paid to the stockings, which should be constantly washed. Worsted and merino stockings are preferable to cotton ones.

If thirsty, one or two oranges will quench that, and be most agreeable to the stomach, as well as being of more benefit than anything else. When in-doors, light dumb-bells and the skipping-rope may be used vigorously to improve the wind, but nothing heavy or too violent, as in this branch of athletics the muscles to be controlled are those of the legs instead of the arms; change of flannels, socks, shoes, a salt

water sponge-bath, rub down; then apply a little bay rum, mouth rinsed out, and a pleasant chat with a friend will make you feel like a new man, and after meals, before alluded to, ready and willing to tackle hard work again. If the pedestrian's appetite falls off, whether from nervousness, sleeplessness or whatever causes, a preparation of iron and gentian may be taken, say a teaspoonful about ten minutes before eating, until his natural appetite returns, when it should be discontinued. If, on the other hand, the food taken does not digest readily, and symptoms of dyspepsia follow eating, then a tablespoonful of wine of pepsin a quarter of an hour after meals will soon bring that trouble over, discontinuing when it does. When sickness at the stomach succeeds, a tablespoonful of prepared lime water, taken in a little milk, when the feeling comes on, acts like a charm. When the bowels are lax, thickened flour and milk are good. If costive, rhubarb preserves, or prune tea, or a mild injection of soap and warm water will be found to answer every purpose.

Some enterprising Knight of St. Crispin, with a view to increase their trade by working on the feelings of pedestrians and others, introduced the old-fashioned piece of steel under the instep, between the welt and the sole, and designated them spring walking-shoes, for which there used to be quite a demand. Experience, however, has proved that the only spring likely to lead to the winning-post is what nature gave, and that all artificial appendages are more likely to do harm than good. The shoe best adapted for a walker of from one to ten miles is a low-cut shoe, laced nearly to the toe, with low heel, broad instep and plenty of room for the toes, and light as possible and of the best seasoned leather. Ordinary

shoemakers can no more make professional running or walking shoes than an ordinary blacksmith can turn out a razor or set of chicken-gaffs, and, therefore, the business should be entrusted to those who make a specialty of it.

The most successful and tractable of modern pedestrians, Charles Rowell, has made more money in his two six-days' contests in New York than he would have in fifty years at a trade or in his own country. Here we are carried away with almost anything of an international character, both press and public. When Rowell made his 500 miles in the first visit and 524 on his second, it was generally conceded that he performed the distance on the square, and hence the patronage bestowed. Other six-day contests have been given with nearly 40 more miles tacked on to the winner ahead of Rowell's time by the black-board, but the receipts were as quarters to dollars in comparison. There appears to be a weakness for figures not altogether warranted by the financial results at the end of the week.

To all, therefore, who compete in long distances for love or money, do not worry about the score, but *keep ahead all the time*. A gain of ten miles on the first day, when honestly made, and with the intention of staying on the track through the competition, will be pretty sure to find the leader far enough ahead to carry off the lion's share, for, as the veteran Jack Goulding's logic proves, if there is a dollar at the end of every mile it is surprising how many miles a man will go. The practice of the crack flyers competing on the first day, with no idea of going the week more by preconcert, may suit the betting ring and the book-makers, but it has hurt the business more than can

ever be patched up again by the most adroit, self-interested parties.

In addition to Rowell, Brown, Hazael and others have been brought out, but they either went wrong or could not be managed by their trainers. Self-reliance is very well, but an ungovernable temper or dissipated habits are sure to be left behind when opposed to tractability and abstemiousness. The English peds used to say there were lots of better men than Rowell over there, but John Astley knew he was unapproachable and as honest as they make them, and, whether the best or not, he carried off the belt against all competitors.

The advantage of an intelligent, capable trainer cannot be over-estimated, and, one who can satisfy his protege of his superiority in his business, as well as a man of nerve, is what is required. When Dan Donnelly, the champion pugilist of Ireland, was trained by Capt. Kelly for his fight with George Cooper, he was in magnificent condition, but when he met Tom Oliver, having had men to look after him whom he considered only his equal or perhaps inferior, he was in no condition at all. We are of the opinion that John Ennis but for James Cusick would never have got second place to Rowell, or Nick Murphy, Steve Brodie, Hart, Panchot, etc., made the time they did but for men of superior qualification.

It will be interesting to the young athletes to know the length of time taken for rest by the six-day men, and therefore supply this information so as to be easy of reference. We allude to the contest from April 5th to 10th, 1880, inclusive: Hart, 23 hours 2 minutes 59 seconds; Pegram, 31 hours 30 minutes 53 seconds; Howard, 30 hours, 50 minutes 39 seconds;

Dobler, 22 hours 37 minutes 12 seconds; Allen, 34 hours 24 minutes 49 seconds; Krohne, 27 hours 18 minutes 15 seconds; Williams, 28 hours 52 minutes 33 seconds, and Hanwaker, 27 hours 58 minutes 21 seconds. Hart's actual time on the course was 118 hours 20 minutes and 1 second, and his average walk in that time was at the rate of 4 7-10 miles per hour.

Rowell's regular food when on a six-days march is beefsteak, chops, bread, vegetables, tea and coffee; occasionally he takes a little pudding and cheese. Guyon feeds on beef tea, chops, potatoes, toast, tea and coffee, but no stimulants. Weston, beef tea, custard, lime water and tea, beefsteak and no stimulants. Ennis, oatmeal, beef tea, rare beef and oysters. Hazael, chops, steaks, crackers, toast and lemon soda. Merritt feeds on jellies, fruits, beef, mutton and vegetables, with tea and coffee. Hart eats chops, chopped eggs, toast, corn bread, tea and coffee.

## TRAINING FOR BASEBALL.

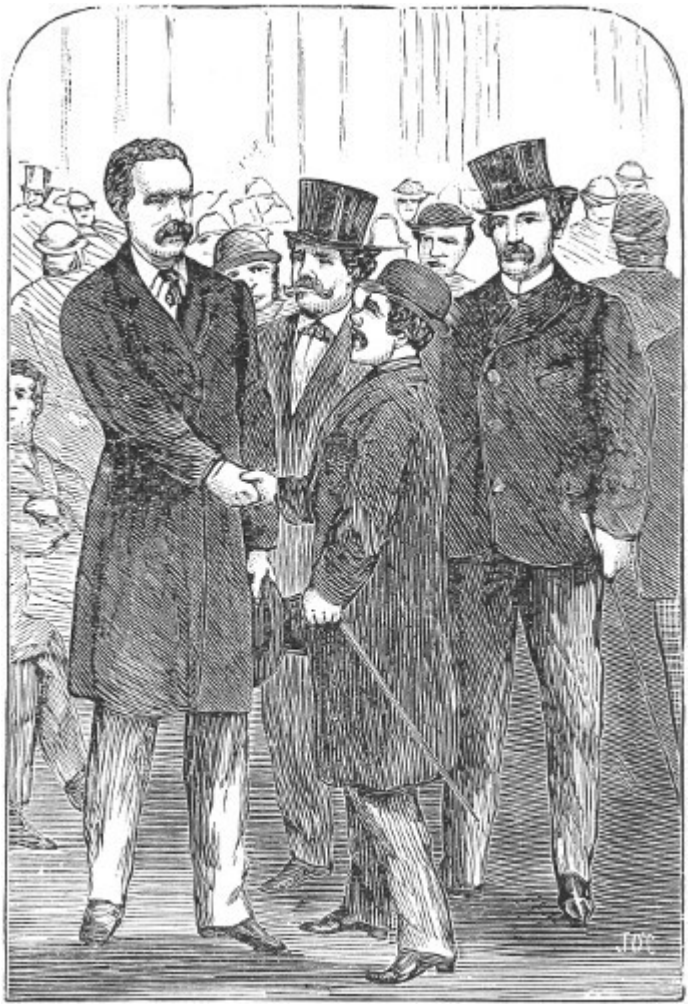
It is well known that an athlete desirous of excelling in any special sport or game must be trained only to the extent to suit the requirements of the sport he desires to become an expert in. To train young men in a gymnasium alike for rowing, running or for field work in baseball, cricket or lacrosse, putting them through the same routine of exercises, is simply to unnecessarily overwork them for one particular

sport, and to give them insufficient exercise for another. Of course, to a certain extent, all kinds of gymnastic exercises, if moderately engaged in, tend to develop a healthful physique, if gone through with under the rules of an intelligent system; but the indiscriminate way in which baseball players enter a gymnasium and go through with what they call their training is ofttimes worse than useless work in preparing them to sustain the fatigue incident to their game. What is necessary for a baseball player in gymnastic exercise is to take only that exercise which makes him agile and quick of movement, and which trains the eye to judge the ball, or the arms and chest to wield the bat, or the legs to run the bases. Lifting heavy weights or exercise which is calculated to develop strength for such purposes is useless. Swinging clubs, if carried to excess; jumping is unnecessary; work on the parallel bars, the trapeze, etc., is needless. In fact, a ball player can find far better training for quick movements, gaining keen sightedness and endurance in a handball or racket court than is possible in a gymnasium. Exercise in short-distance running is good, and all exercises which tend to strengthen the muscles of the ankles—such as skating, for instance—help to train a ball player. But what is particularly required in the system of training for professional ball players is that very activity which handball yields. This game strengthens the hands, trains the sight, and especially gives a player endurance in the very fatigue he has to undergo on the ballfield. A skillful handball player, when he be comes accustomed to baseball field work, will always excel in picking up hard-hit ground balls.



L. E. MEYERS,

The Renowned American Runner.



WELCOMING O'BALDWIN TO NEW YORK.

The Irish Giant, Joe Coburn, Ed. James, J. C. Heenan.

# ADVICE TO BUSINESS MEN AND OTHERS.

The majority of our readers are doubtless young men having in view perfecting their frames for some muscular feat, and the bulk of this work was written principally for their benefit. There is still another and larger class for whom no author seems to have troubled his head about. We allude to those compelled by circumstances to spend their time in sedentary occupations, and are not likely to get time or means to pursue a regular course of training.

It would be simply ridiculous to advise a letter-carrier to take exercise after going his rounds of forty or fifty miles a day, as physicians sometimes do without being aware of the calling of their patient, or to suggest fasting forty days and nights for dyspepsia because Dr. Tanner did it, giving no impossibilities or absurdities, but such as we are willing to practice and carry out. As a general thing, to keep down flesh, if inclined to corpulency, avoid sugar, salmon, eels, herrings, pork, potatoes, beer, bread, butter, milk, champagne, port and anything calculated to create bile. It would be well to dispense with fat meats, eggs, pastry, new bread, cheese and whatever else may produce nausea or indigestion after eating.

Before making your morning toilet, a sponge saturated in tepid salt water should be applied to all parts of the body, and then rubbed dry with a Turkish towel. If too much of a shock to the system, apply a flesh-brush or the palm of your hands vigorously to the skin, after which the sponge bath, and when dry the brush or hand, as before. When the

shower-bath is used, and a person feels exhilarated from its effects, it is better than the sponge bath; but when it produces a shiver or weakness, it should be discontinued until strong enough to indulge in this great summer luxury.

The mere fact that millions of human beings are strong and healthy upon a purely vegetable diet should of itself suggest that, although animal food, as more concentrated, and yielding more force with less expenditure in its digestion, is superior to vegetable food, yet there is excellent nutriment to be extracted from vegetables. The anatomical indications of man, being omnivorous, should also point in the same direction, and the need of vegetable acids, no less than the advantages of variety, at once disclose the error of banishing vegetable food. The chief mistake lies in the cooking. The water in which green vegetables are cooked is poisonous. There is not one house in fifty where the vegetables are not cooked in small vessels, containing very little water, which is never *changed*, and where the greens are sent to table with the water properly squeezed from them. Let any person unable to eat broccoli, or greens cooked in a quart of water, try the effect of having them cooked in a gallon of water, or of having the quart changed three or four times during the process, and he will soon discover the difference. If potatoes are "watery," it is because they are ill-cooked. No Irishwoman serves up watery potatoes.

Veal and pork are rigidly excluded by the trainer, which some will hear it with amazement, and will ask how it was that the ancients gave the athletes nothing but pork. Would the old hen be thought nutritious, and the chicken injurious? Would the sheep be tender, and the lamb tough? And why is the

calf to be blooded, and the ox not? Yet, so long as this practice continues, no one should indulge in veal, unless his digestion be vigorous. Fried dishes, rich gravies and pastry should also be avoided, because of their tendency to develop fatty acids in the stomach. Some cannot endure fat; others cannot get on without it. Some cannot touch mutton; others are made ill by eggs. Let each find out his own idiosyncrasy. The only thing the trainer teaches us is to take abundant exercise in the open air, and to be simple and moderate in our diet, with regularity in hours. If neither time nor strength permits our abundant exercise, and if our avocations prevent regularity, what remains but moderation in diet?

The effects of exercise are two-fold: on the one hand a stimulus is given to the action of the heart and lungs, which enables the blood to be more thoroughly oxygenated and more rapidly circulated; on the other hand, there is an expenditure force, accompanying the increased activity of the organic changes. Exercise strengthens the parts exercised, because it increases the nutrition of those parts. When any organ is inactive, the circulation in it becomes less and less, the smaller ramifications of its network of blood vessels are empty or but half filled, the streams gradually run in fewer channels, and the organ, ceasing to be thoroughly nourished, wastes away. When the organ is active all its vessels are filled; all the vital changes, on which depend its growth and power, proceed rapidly. The force expended is renewed, unless the expenditure has been excessive, in which case there is a disturbance of the mechanism, and depression or disease results. But unless there has been excess, we see that the great advantage of exercise consists in keeping up a

due equalization of the circulation, an equable distribution of nutrition to the various organs. Perfect health means the equable activity of all the functions; not the vigor of the muscular system alone, nor of the nervous system alone; not the activity of this gland or that, but the equable vigor of all. Remember that when life makes great demands upon the muscular energy, the demands upon the brain must be less; and when the demands upon the brain are energetic, there is less force disposable for muscles and glands. The advantage of exercise to a student or any other brain-worker, is that it *lessens* the over-stimulus of his brain, distributes the blood more equably, calling to his muscles some of those streams which would impetuously be rushing through his brain. And understanding what this advantage is, he should be careful to avail himself of it; but he should be careful to remember at the same time that within certain limits all the force with drawn by his muscles is withdrawn from the brain or some other organ. He must not burn the candle at both ends.

It is certain that sedentary men, and men of hard-worked intellects, are greatly in need of some means of distributing the circulation through the muscles. Exercise is the means. When the avocations are such as to render continuous exercise in the open air difficult or impossible, we should seek to compensate for this by variety of gentle activities distributed throughout the day. No error is more common than that of supposing open-air exercise to be indispensable to health: we may have no time for walking, rowing, riding or any of the ordinary modes of out-door activity, yet—as the excellent health and strength of domestic servants, who scarcely ever stir

out, will show—the mere activity of the body, in various occupations, suffices for the equalization of the circulation. Let the sedentary stand as well as sit, changing the posture frequently, and using back and arms as variously as possible. A variety of gentle activities is more beneficial to the student than bursts of violent exercise. Above all things, remember that in exercise, as in diet, the grand rule is moderation. Avoid fatigue; as you would cease eating when appetite abates, cease muscular activity when the impulse to continue it abates.

In general, the healthy man may eat almost anything in moderation; but it is wiser for all to avoid meat twice cooked, rich gravies and fried dishes. Nature tells us very plainly that that pleasure is a means no less than an end. The exercise which has in it the element of amusement is ten times as beneficial as a listless walk; and the meal which is eaten with a relish is far more nutritious than a meal eaten only as a periodical necessity. Solitary walks along familiar or uninteresting roads, or solitary meals on dishes unstimulating to the palate, are not to be compared with rambles through interesting tracts, or with stimulating companions, and meals where the guests, no less than dishes, add their pleasurable excitement.

There is one point of regimen to which attention may be called, and that is, never to attempt severe mental or bodily labor after a full meal. If possible, let all such labor be got through in the early part of the day, after breakfast, but before dinner; not only because the bodily vigor is then greatest, but also because the restoration of that vigor through dinner should not be interfered with. We know that in many cases this advice is impracticable. Night-work is

inevitable in some lives, and is fancied to be so in the lives of students and literary men. In such cases, there is, at least, this mitigating resource—not to commence hard work until the labor of digestion is over. Thousands ruin their digestion by disregarding this simple advice. If work after dinner be inevitable, let the dinner be a very light one, and let a light supper be eaten.

In order to prove the facts above cited, a physician of our acquaintance tried the experiment upon two healthy dogs. They were both fed alike and in similar quantities, one being allowed to rest in quiet an hour after feeding, and the other permitted to run around and frolic for a similar length of time. Both dogs were then killed, and the food of the one allowed to rest was quite digested, while that of the other was scarcely digested at all.

No better general advice can be given in conclusion than that furnished us by the greatest physician of the present time, Dr. Willard Parker, now enjoying rugged health at the advanced age of eighty, and being a living example of the truth of his reasoning.

The blood will be either good or bad, according as the material or food is good or bad. The character of blood made depends on the kind of food taken. In this country, as a rule, too much meat is eaten; meat once a day is sufficient, especially for brain workers. The waste matter from a meat diet is eliminated through the kidneys. Too much labor thrown upon those organs produces disease. An overloaded stomach is unfavorable to active brain work. Man is like an engine with two service pipes, one for the brain and one for the body, and no man has the requisite force to work both at once. Generally

Americans bolt their food. It should be cooked. The first process of cooking a steak is on the range; the second is in the mouth, and this is done by working the saliva into the food by chewing. Thus is the food prepared to be acted upon by the juices of the stomach. Infants in nursing move the jaws to obtain the milk, and the working of the infant's jaw mixes the milk with the saliva, and thus fits that milk to go into the stomach. After being subjected to the action of the stomach for two or three hours the food becomes fitted to pass into the circulation by absorption. To have good food, therefore, it is necessary that it be made of proper material properly prepared. We are furnished with milk to start with as we enter the world. Had meat been the best diet, we should have been born with beefsteaks in our hands. But we are given milk. Milk and blood are nearer alike than any other two fluids; a large proportion of each is water. After milk, breadstuffs and vegetables are the best diet, and in warm climates fruit. Then meats. Sugar and fat go into the body not so much to nourish it as to be a fuel to give it warmth. Meat contains much nitrogenous matter.

A limited quantity of spirits at the principal meal, especially for persons advanced in life or of weak digestion, may aid in the combustion of the food. Spirits aid digestion in feeble and aged persons; but only the feeble or the aged require such a stimulus. The young and vigorous do not need it, and are better off without it. Middle aged persons may perhaps drink a little spirit with their meals without danger; but they cannot safely make it a beverage. In small quantities alcoholic drinks stimulate, and if not enough is taken to coagulate the pepsin and the albumen in the food they promote digestion in

proper cases, and thus help to repair the system. But whenever more alcoholic liquor is taken into the stomach with the food than is demanded it passes into the circulation, disturbs the action of the heart, flushes the face and confuses the brain. When so much fermented or distilled liquor is taken into the system that the functions of the organism are disturbed positive harm is done—the system has been so far poisoned. An irritation has been set up instead of the desired healthful stimulation of the stomach.

The human system contains water, fat, starch, sugar, nitrogenous substances, iron, sulphur, phosphorus, animal quinine, sodium potassium and chlorine; but no alcohol is found. It has no like in the system, hence there is nothing that it can repair, and it cannot, therefore, be ranked as a food of any kind. It possesses an inherent deleterious property, which, when introduced into the system, is capable of destroying life, and it has its place with arsenic, belladonna, prussic acid and opium. Like these, it is to be employed as a medicine, and has its true position in works on materia medica. It is both a poison and a medicine.

It has been settled by science that alcohol, which passes into the blood when more is taken than can be employed as a condiment or tonic, undergoes no change in the blood, but exists there as a foreign substance, creating irritation; and the excitement involved in the effort to throw off the irritating substance wastes the energy and life of the system. After alcohol has produced disease of the stomach it next expends its force upon the neighboring organs, inducing disease of the liver and dropsy or Bright's disease, both of which are fatal to health, if not to

life.

The life insurance companies understand it. Their figures show that while a temperate young man at twenty may reasonably look forward to forty-four years and two months of life, the young man of the same age who poisons his system with drink can expect not more than fifteen years and six months. He who uses alcohol becomes an easy prey of epidemics; his system cannot resist the poison of diphtheria, cholera and fevers.

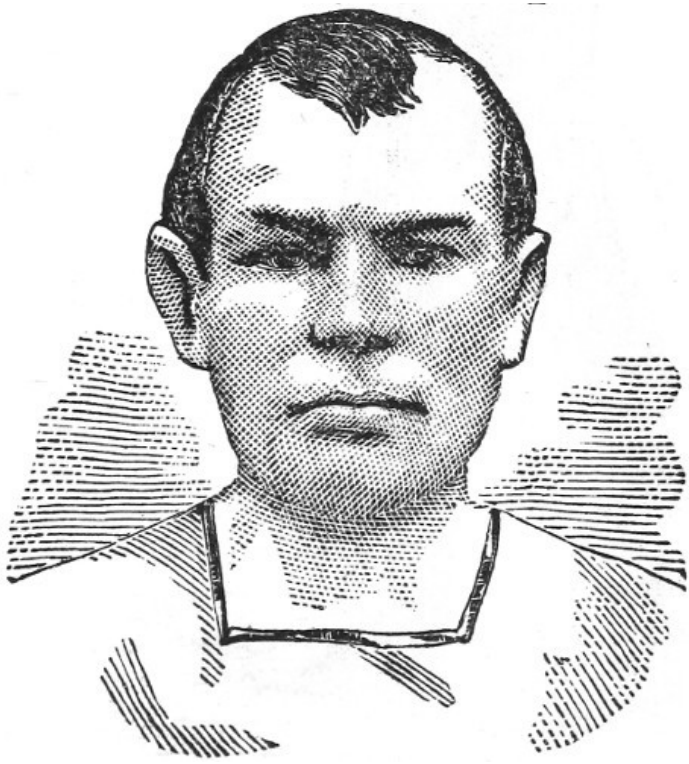
To make good blood we require good food, pure water, pure air, sunlight and exercise. Either foul air or impure water poisons the blood. If you don't throw off two pounds and three-quarters of effete matter every twenty-four hours through the lungs and two pounds through the pores you must expect sooner or later to fall. Nothing is more essential than pure air. Impure air is the source of our ship fevers.

Cleanliness has been classed as akin to godliness. It certainly takes high rank in equalizing the circulation. The jockeys appreciate its importance. How regularly and carefully they groom their horses! Is not man as precious as the horse? Every man should groom himself every morning—sponge himself from head to foot with water of the temperature of the room in which he sleeps. The purpose of wetting the surface is merely to make the friction of a rough towel more effective as it is rubbed over the person. You should not sleep in any garment that you wear by day, and the room in which you sleep should be perfectly ventilated by a fireplace and a partly opened window if possible.



PETER J. PANCHOT,

First Winner U. S. Six-day Go-as-you-please Champion Belt; making 480 miles and defeating 40 competitors.



BLOWER BROWN,

Second Winner Six-day Go-as-you-please English Champion Belt, making over 542 miles, April, 1879.



EDWARD PAYSON WESTON,

the American Long-distance Walker.

If, after you have observed the rules of hygiene to the extent indicated you have cold feet and limbs and indigestion and a tendency to vertigo, plunge

your feet into water as hot as you can bear it, and keep them there five minutes. Then put them into cold water for a second.

"Cool head, free bowels, warm feet and a good-salary" is the old aphorism. If you suffer your feet to get cold you are in danger of apoplexy of the brain or of the lungs. Cold feet are very likely to be associated with a sluggish state of the bowels. The feet are cold because there is too much blood in one place and too little in another. Cold feet follow the breaking of an equilibrium of the circulation. Sedentary occupations are provocative of cold feet. If you keep the skin clean and the bowels free and take moderate exercise you will maintain an equilibrium of circulation, and this equalized circulation will keep the feet warm. When the feet are cold it is better to warm them with exercise than at a fire. Look at the wood chopper, swinging his arms so that his hands slap his sides. Thus he carries the blood to his hands, and it warms them. That is the best warmth for either. There is a vast difference between the longevity of men who take care of themselves and of those who do not. It is, as the life insurance companies' tables show, as thirty-five is to about seventy. The man who bows to all the known laws of hygiene not only lives longer, but is able also to enter into all the joys of life without the aches and pains.

## THE LATE JOHN MORRISSEY'S

# VIEWS.

The Honorable John Morrissey, ex-champion pugilist of America, in conversation with us about diet, said:

"Mr. James, you can form no idea of the glorious feeling that a man experiences when he gets himself in perfect condition. Everything in the world looks different to him from what it does when his system is clogged up with bile, and he is carrying a quantity of flesh that is only a burden to him. It is almost impossible to get a man when in such a condition into a bad humor. He feels like a young colt, and wants to kick up his heels and have a good time with everybody and everything he meets." His course of training was as follows:

FIRST. Take a black draught. Any druggist will put it up. All prize-fighters take this when they begin to train for a fight. You'll find it the liveliest dose of medicine you ever took.

SECOND. Be sure and get at least seven or eight hours of good sound sleep every day.

THIRD. In the morning when you first get up drink a glass of hard cider with a raw egg in it. If the cider is not to be had then use sherry wine, but I prefer the cider. Then start out and walk briskly for a couple of miles. When you come back take a sponge bath and rub yourself dry with a coarse towel. Bub until your skin is all aglow.

FOURTH. For breakfast eat a lean steak, cooked rare, and stale bread. Use no milk, no sugar, no butter, and no potatoes, with the exception of about once a

week. If you wish you can eat a roast or baked potato in the morning. Drink sparingly of tea and coffee. Tea is the best.

FIFTH. For dinner eat rare roast beef and stale bread. Use no potatoes or vegetables of any kind with this meal. For change you can have occasionally a mutton chop.

SIXTH. For supper, a lean steak or a mutton chop, without fat. Do not eat any warm biscuits or warm bread, at any time. Stick to good wholesome stale wheat bread. Eat no pies, cakes or pastry of any kind, and use pepper, salt and all other seasonings very sparingly.

SEVENTH. Use no stimulants of any kind. Do not smoke. Drink sparingly of water. Do not eat berries or vegetables of any kind, excepting occasionally a raw onion.

EIGHTH. If you feel weak in the morning before breakfast, it comes from the bathing, and it should be discontinued for a few days.

The system for hardening the muscles, etc., most approved of by the Senator and the leading pugilists, is being first sponged with a decoction of arnica flowers, alum, borax and Jamaica rum, then bathed with hartshorn liniment, and an application of white wine vinegar mixed with alum and borax to the face and hands. The proportions of the ingredients used in the sponge bath have hitherto been a profound secret with the professional trainer. For the benefit of the fraternity we here print them: Take two pounds of arnica flowers, five cents' worth of borax, five cents' worth of alum, and steep all together, after

pulverizing the alum and borax, in a gallon or so of Jamaica rum, and after letting it steep for twenty-four hours, apply as before stated.

## TRAINING IN REGARD TO PUGILISM AND WRESTLING.

The work necessary to reduce or otherwise bring the pugilist into something like condition will be, of course, nearly if not precisely similar to the training required for a pedestrian or other match. The physicing will require great attention; all drastic and griping medicines are to be avoided, if possible, and cases will occur from time to time where no medicine ought to be given whatever. The man in one of these instances will be in a low state, and require feeding and training up. In another, the body will be in so open and relaxed a state that the prescribing and giving the usual dose would be followed to a certainty by the patient training right off, and failing into a low and prostrate condition. In the general state of health, however, which characterizes the pugilist when matched to fight (with a full habit of body, flushed countenance, and a pulse full and slow), the usual dose, salts, etc., may be introduced with advantage, but the quantities and frequent use left to the usual habit of the man, or to the judgment of the trainer. The physicing and preparation for the hard work should occupy the first week; and the number of sweats taken during the

second week should be regulated by the state of inside and the loose flesh on the body. A sharp run will soon show the state of the inside by the state of "the bellows," whether the wind is short or not, and the manner in which the looser flesh shakes when sparring is a pretty fair criterion of there being a good quantity of outside superfluity to get away. He ought to be rubbed down after his runs and fast walks, and dry clothes put on in a warm, dry room. The loss of weight should be gradual. If, on the contrary, the loss be too rapid, and continue daily, the reducing system must cease, and feeding up take the place of sweating for a few days until the system is restored. The meals, of course, must be taken regularly, and consist of the same kind of animal food as recommended previously, and the beverage most suited to the constitution of the man taken in small quantities—the kind and quantity, of course, being left to the judgment of the trainer. Wine is principally given when the man has to be trained up, and then good old port wine will be found to be of the most service. The pugilists of the present day strengthen the arms, loins, and shoulders by hitting out at a striking-bag suspended from a beam, and a large bladder hung in like manner; by exercise with pulleys, the ropes passing over wheels and having weights attached; plenty of practice with the gloves, diversified with the use of a skipping-rope, and finally, but by no means of minor importance, by continual sharp practice with dumb-bells of about seven pounds weight or under. Good condition in the pugilist will be shown by the healthy state of the skin, which will be clear, with a ruddy tinge underneath, as well as soft, with the muscles underneath swelling and feeling firm to the touch at every movement of the limb or portion under

manipulation. The eye will be clear and bright, and a look of confidence and ease of mind characterize the expression and looks of the athlete. As regards the pickle for the hands and face, the nostrums for the first are legion, and one as good as another; but we believe that nothing is better than the simple juice of a lemon for the latter, and which will be found to answer every intended purpose.

The trainer ought to be chosen with regard to his conversational powers, as well as for his knowledge of what is requisite for the physical health of his pupil, that he may amuse and instruct him to the fullest extent of his power. The trainer should inform him, if possible, of all the peculiarities of the antagonist, his mode of attack and method of defense, the weak points of his temper, or any physical deficiency under which he might labor, as well as the manner in which he may have won or lost any previous battle. And, as in many cases the first or second telling may not have the effect of raising the curiosity of his man, the patience of the trainer should not give way under the repetition before the slow and obtuse curiosity is roused to such an extent that the pugilist commences the interrogation in his turn, and becomes anxious in his inquiries for information, which will almost invariably be the case when he finds out the importance that the trainer’s continued repetitions have invested the apparent trifles with.

# PRINCIPAL MUSCLES USED BY THE ATHLETE.

In high jumping, the front muscles of the thigh are principally used. They are attached at one end to the top part of the thigh bone, at the ocher to the knee cap, which passes over the knee, and is fixed to the top part of the shin bone. In the act of jumping, these muscles contract violently, and straighten the leg with a jerk, the quickness of which mainly contributes to the height of the jump.

In long jumping, the muscles of the back part of the thigh are used; these are attached to the back part of the shin bone at one end, and to the lower part of the pelvis at the other, and by contracting draw the leg backwards on the trunk. This action is also assisted by the glutœus maximus, which is fixed at one end of the top part of the thigh, at the other to the lowest part of the vertebral column.

In long distance running, the front and back muscles of the thigh are used in equal proportions; the former in raising the body at every stride, the latter in propelling it forward. But in the case of running on the toes, the calf of the leg will be the weak part; so much so that no amount of practice will enable some, especially heavy men, to run any distance on their toes.

In short distance running, the front muscles of the thigh which lie nearest to the trunk, bring the leg forward in the rapid repetition of the strides. These are a different set from those that straighten the leg, and are used in long distance running; they are

attached at one end to the lower and front part of the pelvis, and at the other end to the top part of the thigh bone. The back muscles of the thigh are the same that are used in long distance running for propelling the body forwards. A narrow pelvis is a great assistance in this, as indeed in all running; for on the narrowness of the pelvis facility in repeating the strides principally depends.

In throwing the hammer, more depends on the swing than on the strength of any particular muscle, though the strain comes more particularly on the small of the back—that is, on the muscles which raise and keep the back erect, and are attached to all the vertebra of the spine.

In putting the stone, the muscles called particularly into action are the front part of the deltoid, which is attached to the top part of the arm, and at the other end to the collar bone, and brings the arm upwards and forwards; the top part of the pectoral muscle, which also runs from the top of the arm to the collar bone, and brings the arm forwards; the triceps, which is fixed at one end of the shoulder and shoulder blade, and at the other end of the forearm, below the elbow, and extends the arm at the elbow joint. The feet are also assisted by a simultaneous spring with the legs, and a rapid turn of the body.

In walking, the muscles of the whole body are brought into action more than in any of the other exercises we have alluded to. The arms and back assist the legs greatly in changing the balance of the body, and in bringing the hips forward at each stride. The calf of the leg has much work to do, even as much as running on the toes. The muscle, however, that suffers most is that which rises on the outside of

the shin bone, near the knee, and runs down the leg, crossing the shin near the ankle, to be inserted near the inside of the sole of the foot. This muscle raises the foot, and draws it back towards the leg at the end of the stride, and also points the heel at the commencement; so that in fast walking it has no rest, and consequently becomes very painful. The front and back muscles of the thigh also come in for a large share of work.

The following measurements are an average of the dimensions of some of the best runners, and may be taken as a fair guide of what the proportion of the limbs should be respectively:

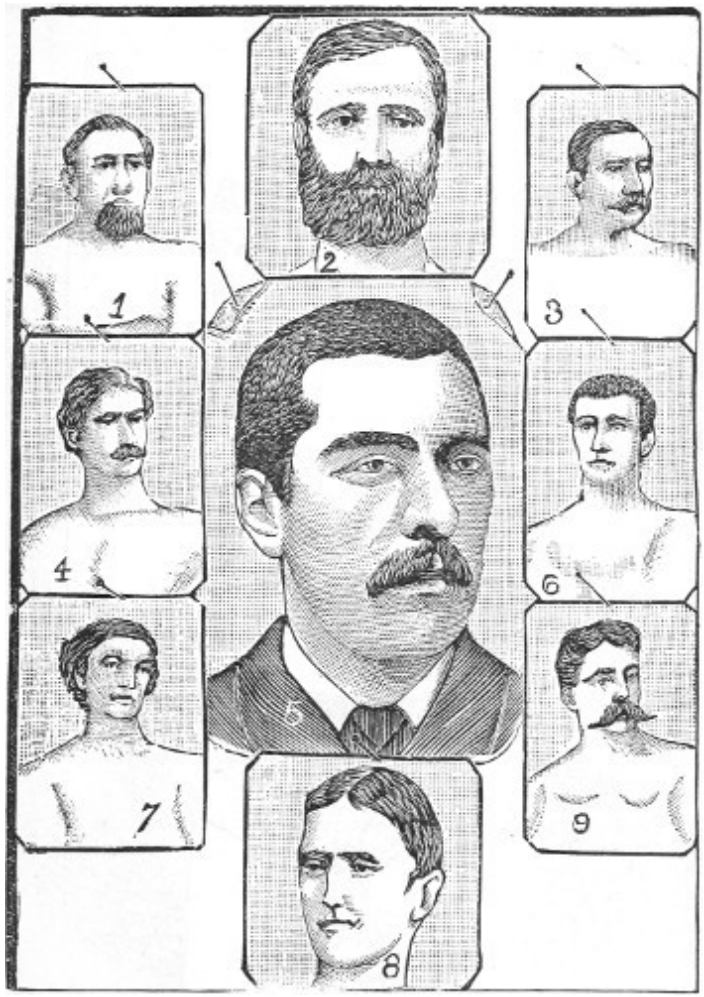
5 ft. [illegible]
6 in.
11 [illegible] lbs.
3 [illegible] in.
2 [illegible] in.
3 [illegible] in.
2 [illegible] in.
13 [illegible] in.

The dimensions of the chest may appear small at first sight, but it must be remembered that the runner has no muscles of the shoulder blades to increase his measurement. A well-made runner has not that top-heavy appearance that characterizes the gymnast who does much arm work.

# TEMPERAMENT.

The Sanguine Temperament belongs to that class with bright, ruddy complexion, light hair, and full circulation. Their disposition is energetic and spirited, but their power of resisting disease or of bearing protracted exercise is not great, and their ardent character is rather the result of nervous excitability than of vital force. Their power lies in dash rather than in endurance.

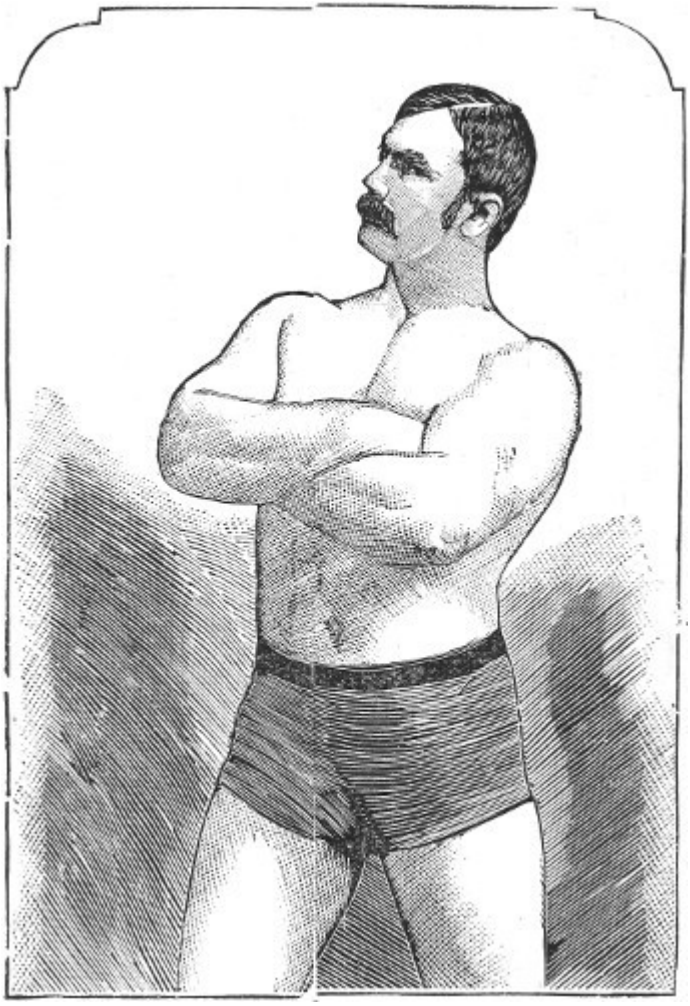
The Bilious Temperament is of an opposite description. The circulation is sluggish, the disposition persevering and obstinate; the constitution as a rule is tough, and is capable of severe tasks, under which the sanguine would succumb. These men are good subjects for training, but they require good food and much exercise.




NOTED SWIMMERS.

1. Geo. Werhan. 2. Fred. Beckwith. 3. Capt. M. Webb.

4. E. Von Shoening. 5. Geo. F. Ferns. 6. Geo. Wade.
7. Wm. H. Daly. 8. H. Troutz. 9. Wm. Beckwith.



WILLIAM MULDOON, Wrestler.

The Lymphatic are of a pale complexion, with delicate skins and full habit of body. There is a torpor about their mental as well as muscular actions. When subject to disease they become peevish and are difficult to treat. When united to a nervous disposition, they are perhaps the worst class of men for training, though we sometimes find much latent energy in them. To a certain extent, nervousness is overcome by habit; but the nutrition of the nerve power ought to be the main point in the advancement of health. The nerves are the controllers of the actions; they regulate the contraction of muscles in the activity of the body. The work done by the muscles depends on the proper adjustment of the mechanism, their guidance and activity on the energy of the nerves. The important work that the nerves fulfill is evident, when we consider that the brain itself needs one fifth of the whole supply of the blood in the body. It must suffer, therefore, if the supply of air to the blood is bad. How easily is accounted for the dull aching of the temples of the athlete accustomed to pure air in a badly ventilated theatre or room. If deficient oxidation of the blood is the cause of derangement to the nervous system, blood of bad quality must be equally hurtful to the muscular. The sensibilities of the internal organs are the disposition of each person to such a degree as to be influenced by the slightest sensation of pain, joy, grief, or any feeling of the mind. The reaction affects the muscular system; all the functions of body are carried on by a system of self and mutual help, so intimately united together as to be dependent for proficiency on one another.

# GROWTH AND DECAY.

The food after mastication by the teeth, and solution by the action of the saliva, gastric and other juices, is taken up by a system of vessels, and, mingling with the venous blood, is carried to the heart, whence it is sent to the lungs to be aerated, and back again by another set of vessels to the heart, to be finally pumped through the arteries to all parts of the body, carrying materials for the repair of the tissue, and production of heat. In the very minute terminations of the capillary arteries in those structures, where the molecular change of the body goes on, the current of the blood is very slow, to enable the warmth and sustenance of the body to be kept up by the chemical actions of destruction and reproduction of tissue. The oxygen in the arterial blood obtained from the lungs is carried throughout the system and assists these actions, therefore perfect respiration and pure air are the great promoters of change of tissue. This shows the necessity of the blood being in a sufficiently liquid state to hold gases and nutritive matter in solution for the purposes of oxydizing tissue and of forming flesh. The amount of water in the blood determines to a great extent the health of the body, the blood being the organ of the vital processes of change. The severe restrictions on liquid imposed on those in training, who by arduous exercise waste much tissue and need much repair, are, therefore, physiologically wrong. The action of the air on the skin stimulates the secretion, and exercise, indirectly raising the heat of the body, induces perspiration, which is nature's remedy to keep the temperature of the body constant. Evaporation and secretion require water. On a daily average, 2lb. of water is thrown off

by the skin in moderate exercise. Water forms 70 per cent. of the whole body, and for the digestive fluids the proportion of water to solid is as 12 to 1. Liquidity is necessary, also, for the actual processes of decay and repair, by causing the passage of fluids of different densities through the various animal membranes from the oxydation of venous blood in the moist air of the lung cells to the repair of tissue by the smallest capillary in the extremities.

Want of liquid causes a stagnation of the circulation, an inflammatory state of the body, and excites the nervous system to an extraordinary degree. Owing to this want, under the usual system of training regimen, the body is frequently in a state of fever about the second week, until either the trainee gives up the preparation, or his constitution has temporarily accommodated itself to the change at the expense of his vital energy.

The nourishment of the body by the food taken is important in its regard to health, and its variety. The primary object of food is to form blood, and according to the condition in which the body receives it, greater or less nutriment, at the same expense of vital activity, can be obtained. The assistance of nature, by proper cooking and careful selection of articles, is in our own hands. Our vegetables should be well cooked, and the animal food ought to be done so as to retain the juices of the meat. Let it be rather under than overdone. Brown meat is more nutritious than white. If the digestion is good, the athlete need not be particular as to description of food. Rich sauces are not to be recommended, or even heavy puddings, but jellies and light ones are most acceptable. A healthy, robust man, in hard work, may eat nearly anything in

moderation. The food should be well masticated, to enable the saliva to dissolve the starchy matter in it, and also to prevent a sudden loading of the stomach. The blood during digestion is principally employed about the stomach. Exercise or mental work, therefore, directly after a meal, will retard the operation of digestion by taking away the blood to the limbs or brain.

Great mental activity requires much repose. In the winter more sleep is required than in the summer, from the fact that the activity of the system, in keeping up its warmth, etc., though of shorter duration, is greater. Sleep after food is often required by nervous persons of weak digestion, but the athlete is better without it, an amusing book, light study, etc., taking its place. A mattress gives the soundest sleep. The quantity of clothing should be sufficient to keep up a gentle exhalation from the skin. The wasting of the body to reduce weight is frequently carried to a ridiculous extent. It has been proved that the body in daily work loses about 1-24th of its weight, and that life ceases when the waste has reduced it to 3-5ths of its original weight. In the nerves, however, the loss is hardly perceptible; while the fat suffers in double the proportion of the muscles, 90 and 45 per cent. respectively.

This may well explain the nervous excitability of the body when kept beyond its regular time for food, or when supplied with food of deficient quality. The arrangement of the internal mechanism must go on, respiration continues, circulation and heat result, at the expense of the machine itself. By regularity in meals the stomach accommodates itself to the changes of action and repose, and the system harmonizes with it.

## MEATS, ETC., TO BE AVOIDED.

Veal, pork, and salt beef or bacon should be avoided; also goose, duck, and wildfowl generally; as well as butter, cucumbers, sweets, and all seasonings, except salt with a little black pepper. Venery should not be indulged in under any circumstances while training.

## NATURAL SWEATING.

Put on extra clothing over those parts more particularly which are loaded with fat. Thus, if the legs are very fat, two or three pair of trowsers should be drawn on; if the abdomen is full, then a double apron of flannel should be suspended from the neck under the trowsers; and if the arms and neck are loaded, two or three thick undershirts may be worn, and a woolen shawl wrapped round the neck. When thus clothed, a brisk walk or a slow run of two or three miles brings on a profuse perspiration, which may be kept up for an hour or so by being covered with blankets, or by lying in front of a good fire; the clothes should be then stripped off, beginning with the upper part of the body, and sponging each with hot salt water, before drying it with a coarse towel,

after which horse-hair gloves should be used freely. The dressing may be as usual, taking care to expose each limb as short a time as possible.

## ARTIFICIAL SWEATING.

Take a Turkish bath, or the whole body should be stripped and immediately wrapped in a sheet wrung out of cold water, but not so as to get rid of all the water; then, rolling the patient in a thick blanket, inclosing the arms, like a mummy, he is placed beneath a feather bed, covering all up to the chin. In a quarter of an hour or so reaction comes on, and a most profuse perspiration breaks out over the whole body. When the sweating has continued from an hour to an hour and a half, everything should be taken off, and cold water poured over the whole body by means of a shower bath; then rub dry and clothe.

## SWEATING LIQUORS.

A scruple of Dover's powder at night, or half a pint of whey made with white wine, and with thirty drops each of antimonial wine, and sweet spirits of nitre added. Care should be taken to rub the whole

body with horse-hair gloves night and morning.

## TREATMENT OF THE FEET, HANDS, SINEWS, Etc.

The chief cause of tender feet rests with the socks and shoes or boots in which the pedestrian may commence his work. By no means attempt work in new boots, or in those, however well seasoned, that are not of sufficient length and width in the tread and across the toes. The thickness, so as they are of a sound double sole and perfectly water-tight at the lower part, does not so much matter; but a few days' use will soon prove to the training man that a rather stout pair will keep his feet sounder and be of more comfort to him, in a long journey, than the lighter kind, Different men, however, are of various opinions; but Westhall, during a long experience, found that a pair of boots laced up the front and reaching a trifle above the ankle and of medium stoutness, answered every purpose required by anyone who is satisfied with doing well. A very thick pair, of course, may be kept in reserve for very wet and muddy weather, when slow work only will be advisable to be taken. Should the pedestrian, however, be obstinate, and take fast work in the heavy boots, he will in most cases be punished by sore shins, which will prove a source of such trouble that the lighter sort of boots will be in requisition for the future. The socks should be of an easy fit and of

fine warm lambs'-wool. The chief care about the socks, however, is taking the precaution that a pair of socks should never be worn a second time until thoroughly aired, and if possible a supply should be so provided that they may be rinsed out in cold water, and then dried before again being worn.

The above precautions will prove of the greatest value to those who have feet given to sweating, and in some instances have proved an effectual cure for the inconvenience. The toenails should be attended to regularly, and the shape of the foot will be the best criterion for their treatment. To prevent the hands from swelling, a short stick or switch, carried in the hand will be efficacious while walking about. Strains are of frequent occurrence, and chiefly arise from the man making some sudden effort when the tendons or the fascia (the thin covering) of the muscles are stiff and sore from previous hard work. The tendon Achilles—from the heel to the calf of the leg—is the principal seat of the most dangerous of the strains of the tendons, and is incurable except by rest, and that of some duration. Should there be any swelling and hardening of the injured portion of the tendon, *do not* attempt any methods of self-treatment, but seek *medical* advice. All strains are assisted in their cure by bandaging, but they should not be applied until hot fomentations for some time have been applied, and finished up by the application of the embrocation, with plenty of friction, before a fire.

SOFT CORNS.—Pick off with the nails as much as possible; next day apply caustic, rubbing it in; afterward keep a piece of carded cotton between the toes night and day.

HARD CORNS.—Pare off the hard cuticle; then apply tincture of iodine with a brush or caustic.

HARDENING THE FLESH.—Lemon juice is one of the simplest and best for rubbing on the hand. Horseradish grated and mixed with vinegar is also good. Whiskey poured in the shoe is frequently used.

BUNIONS.—Apply two or three leeches every day for a week; when the bites are well, brush with tincture of iodine every other day. An application of "Papier Fayard" is sometimes very beneficial.

BOILS.—Apply linseed poultice, or open it with a knife. If on the "seat of honor," apply a plaster spread on leather, and composed of equal parts of mercurial and opiate plaster. Do not use the knife. To those subject to boils use the following as a preventative: take nitrate of silver, from fifteen to twenty grains to the ounce, made into a wash, and paint the surface every night. This turns the skin black, but do not mind that.

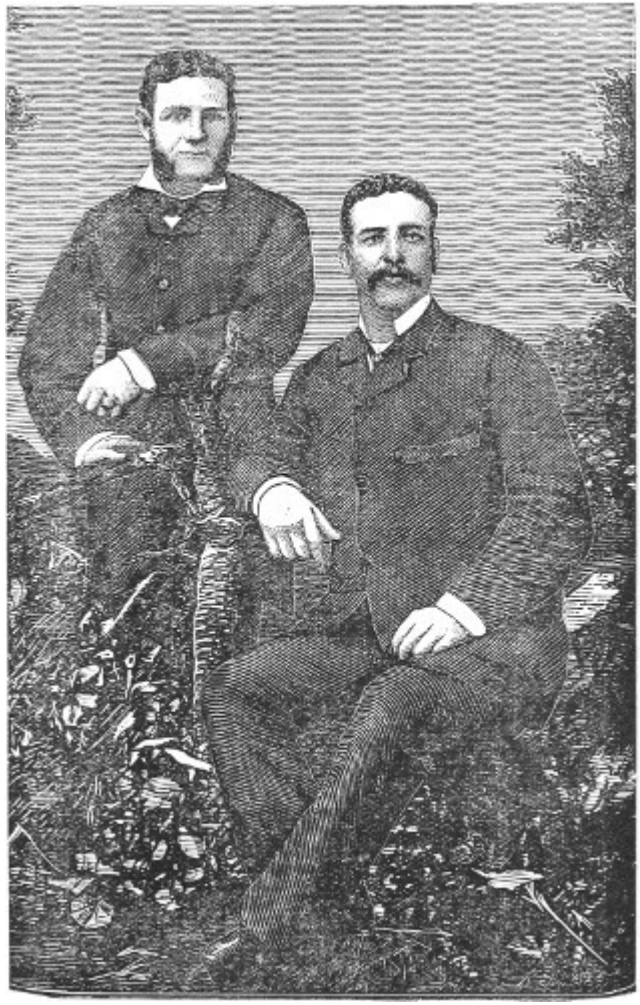
STRAINS.—The following is the receipt of Westhall's stimulating embrocation: Spirits of wine, ¼ pint; spirits of turpentine, ¼ pint; white vinegar, ¼ pint. Mix thoroughly, warm by the fire, beat up a fresh egg, and mix gradually with the spirits, etc.; shake the bottle well.

SPRAINS.—For sprained ankle, make a flannel bag about a foot long by six inches wide, which fill with

bran and plunge into boiling water until thoroughly saturated; then squeeze almost dry, and apply it as hot as the patient can bear on the weak part. There should be a couple of bags, so that when one application gets cool fresh heat may be immediately applied.

CHAPPED HANDS, ETC.—Smear over the parts chapped with glycerine, by means of a brush or feather, night and morning.

BLISTERS.—Prick with a fine needle before they burst, inserting the needle obliquely, and the water presses out, repeating whenever the blister fills again. If the blister is broken, apply collodion with a brush; if too painful, use finely carded medicated cotton in a thin layer, under a kid glove, or powdered gum-arabic, taking care to keep the hands from water for twenty-four hours. For feet blisters, spread a piece of kid with soap-plaster, applying over the skin; also bathe in strong salt water mixed with powdered alum and vinegar. If large, run a stocking-needle threaded with white worsted through; then cut the end off, leaving the worsted in the blister until the water runs out. Do not leave off washing the feet in salt water, etc., as this will act as a preventative.



LARRY FOLEY,

JACK THOMPSON,

Noted Australian Pugilists.



JOHN ENNIS,

Long-distance Walker.



CHARLES A. HARRIMAN,

American Long-distance Walker.

# EXERCISE, SUN BATHS, ETC.

The increasing interest in the matter of healthy exercise is shown by the number of athletic clubs and gymnasiums throughout the country, especially so in our colleges of learning and public institutions. Most of these have every gymnastic appliance, as also professors to give instruction; but where such do not exist a complete outfit at a very moderate expense can be obtained, all ready for use. The rowing machine has been previously described. The health lift, as a gentle exercise, is rapidly becoming an institution of necessity to persons of sedentary habits, and brings into action, when properly used, as many muscles of the human frame as any other exercise, and yet consumes but a few moments of time daily, which of itself is an important item to brain-workers and industrious humanity generally. It is so adjustable as to be alike suited for the weakest, strongest, shortest and tallest persons of either sex. Indian clubs, dumb-bells, trapeze bar and rings and striking bag may all be readily obtained, and, simpler still for in-door exercise, Goodyear's Patent Parlor Gymnasium, which can be used by ladies and children without any fear of strain or the slightest jar to the system. Dr. Dio Lewis, in his work on New Gymnastics, gives a series of movements and illustrations without the aid of any auxiliaries, so that there can be no possible excuse for neglecting exercise. Sun and air baths, involving no expense, can always be had. By these we mean exposing the body naked a certain portion of the day to their effects. It was the custom of John Quincy Adams to walk up and down his bedroom nude, and with open windows as a preventative of colds. This he practiced both winter and summer, with the desired effect, living to be over eighty. With a view still more to the assistance and preservation of nature, General

Pleasanton has written an elaborate work, claiming wonderful effects in nervous diseases from the sun's rays as reflected through blue glass panes, and his theory is extensively practiced with very encouraging results. Dr. Samuel R. Elliott of this city, an athlete as well as a very skillful physician and scientist, has found that in some cases the blue glass alone produces too strong an effect, and believes that alternate blue and white strips, two or three inches wide, engender the proper form and quantity of electricity; and we therefore suggest that his plan be adopted. The patient should sit for an hour or more daily in such position that, whatever part of the body is affected, may be acted upon by the rays thus received. Where advice can be had it is better to obtain it, as all persons cannot even take electricity in the same manner, quantity or proportion. The glass should not be colored on the surface alone, but through and through, of a deep mazarine hue.

## BATHS—HOT, COLD, ETC.

The use of water cannot be too much applied to any athlete as regards outward application, but of course cold is the most beneficial if the constitution of the recipient be of sufficient vigor; and there are but very few indeed who are so delicate as to require tepid or warm water; but even the latter are better than the absence, even partially, of the bath. Cold baths may be taken anyhow and anywhere, provided the whole of the body is immersed or thoroughly

sponged over, but the most decided benefit will be derived from the plunge bath. However, equally successful results may be gained by the use of a large bath well filled with water, the body being well sluiced with the water from a large sponge. The shower is also of great benefit, but in some conditions of body the sudden shock has rendered the nervous system so irritable that it has undone all the good intended by the reaction. Where there is not the convenience of a bath of any kind, a towel dipped in water and the body thoroughly and briskly rubbed will insure a thorough cleansing of the pores of the skin, and of course a proportionate share of vigor given to the frame. In the present system of training, the pedestrian puts on his sweaters and does the work set him by his trainer, and then, when he is in a state of perfect perspiration, he throws off his wet and reeking flannels, and takes his shower with the greatest unconcern, knowing that the friction which is afterwards applied will restore the proper heat of the body after the sudden shock of the shower has closed the pores of the skin for the time and relieved him of all his previous fatigue. The rubbing restores the circulation of the small blood-vessels of the skin, and so strong and fresh do the pedestrians feel after this treatment that, when dressed, they all declare they feel no remains of their previous fatigue. Nothing but good has accrued from the treatment, and those who have undergone a trial of the sweat and shower swear by the method.

The Turkish bath is only fit to reduce an infirm and obese man to something like weight to begin work, and can only be looked upon as a luxury, and not an adjunct to training, besides being far from healthy. The hot bath is of course required when a man is stiff

and tired all over from cold or overfatigue, when they will modify the symptoms; but, as they are so simple and so easily obtainable, they require no further comment. A vapor bath is of considerable use in assisting a healthy and fat man to reduce his weight; but after sweating he must be rubbed with a wet cloth, or have a shower; he should then put on a set or two of flannels, and do at least an hour of severe work, during which time the reducing process will be going on in perfection. On arriving home the wet towel should be applied, or a sponging with cold water; after a good rub, and fresh clothing being donned, it will be found there has been a good morning's work accomplished.

The vapor bath can be made in a very home-spun and simple manner, but equally efficacious with those attached to baths of large name, etc. A washing or any other flat tub, a third filled with very hot water, in which is placed a stool, will do for the ground-work of the vapor. Take your seat on the stool, the feet of course outside the tub, and be well covered with blankets round the neck, and round the tub, leaving an opening which can be closed at leisure. Having heated two or three large bricks to a red heat, put one into the water, and when cooled another, until the bath has been prolonged a sufficient time. This is a primitive but a very useful bath to put into use to relieve a bad cold, or for any other service required at a short notice.

# THIRST, MEDICINE, ETC.

The chief punishment when a man is in the course of training requisite to reduce his bulk is thirst, which is in most cases of rather a severe character. The same amount of pluck which enables the man to go through his work and adhere to other rules must be here called into requisition. The best plan is to gargle the mouth, but not swallow any; but the application of cold water will be found to afford the greatest relief—washing the hands, wrists, and face freely will give relief; a little pebble kept in the mouth is a very good thing, but faithfully avoid all nostrums such as cream of tartar, tartaric acid, etc., when suffering from thirst, as they only gratify the palate without relieving the craving for liquid immediately the acid taste has passed, when the before troublesome feeling becomes much augmented. Should relief, however, become imperative, a small portion of powdered nitre will be followed by an immediate flow of saliva, which will give instant but unfortunately only partial ease. There, however, is no increase of the symptoms from the application of the remedy, which will assist the action of the kidneys, and allay the accompanying fever of the system. The chief cure is to wait until the next meal-time, when the previous abstinence from stolen enjoyment will be rewarded by an approving conscience in having resisted a severe temptation. The thirst will leave a man when he leaves off sweating.

# WEIGHT AS PROPORTIONAL TO HEIGHT.

| HEIGHT. | WEIGHT. |
|---|---|
| 5ft. 1in. | should be 120 pounds. |
| 5ft. 2in. | " 126 " |
| 5ft. 3in. | " 133 " |
| 5ft. 4in. | " 136 " |
| 5ft. 5in. | " 142 " |
| 5ft. 6in. | " 145 " |
| 5ft. 7in. | " 148 " |
| 5ft. 8in. | " 155 " |
| 5ft. 9in. | " 162 " |
| 5ft. 10in. | " 169 " |
| 5ft. 11in. | " 174 " |
| 6ft. —— | " 178 " |

The above table was formed by Dr. Hutchingson, and was taken from a mean average of 2,648 healthy men. By this scale life insurances are regulated in England. The Doctor's calculations were made upon the volume of air passing in and out of the lungs, and this was his guide as to how far the various organs of the body were in health, and the lungs in particular.

# WEIGHT WHEN IN CONDITION FOR ATHLETIC FEATS.

| HEIGHT. | WEIGHT. |
|---|---|
| 5ft. 1in. | From 106 to 111 pounds. |
| 5ft. 2in. | " 112 " 115 " |
| 5ft. 3in. | " 117 " 118 " |
| 5ft. 4in. | " 119 " 125 " |
| 5ft. 5in. | " 125 " 129 " |
| 5ft. 6in. | " 128 " 134 " |
| 5ft. 7in. | " 133 " 140 " |
| 5ft. 8in. | " 140 " 147 " |
| 5ft. 9in. | " 148 " 154 " |
| 5ft. 10in. | " 155 " 163 " |
| 5ft. 11in. | " 165 " 174 " |
| 6ft. —— | " 175 " 186 " |

The proper measurement according to the height and weight:

## Measurements.

| | | |
|---|---|---|
| Height | 5 | feet. |
| Weight | 103 | pounds. |
| Neck | 12 | inches. |
| Chest (uninflated) | 32½ | " |
| Wrist | 5½ | " |
| Ankle | 7⅔ | " |

### Allowances.

The following allowances should be made where the dimensions are found to be greater than shown in the preceding table:

| | | |
|---|---|---|
| For every inch in height | 1¾ | pounds. |
| For every inch around neck | ¾ | “ |
| For every inch around chest | 1 | “ |
| For every ⅛ inch around wrist | ½ | “ |
| For every ⅛ inch around ankle | 1 | “ |

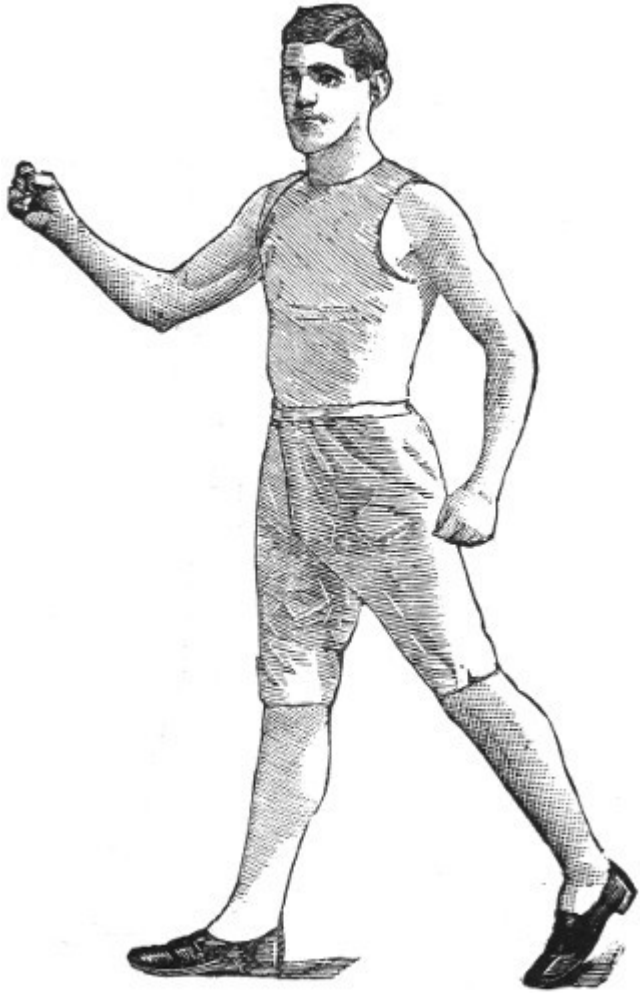
## BANTING ON CORPULENCY.

The system of reducing corpulency as adopted by William Banting, an old retired merchant of London, England, in 1863-4, by the advice and direction of Doctor William Harvey, of Soho square, in that city, though not by any means admissible or advisable for training purposes, we give the substance for the benefit of any one who feels interested. At the time Mr. Banting commenced his reducing system he was sixty-six years of age, weighed 202 pounds, standing only 5ft. 5in. in height, and, having spent seven years in consultation with the greatest medical lights of England for relief of his affliction, but in vain. He had followed an active business life of fifty years,

and attributed his obesity not to neglect of necessary bodily activity nor from excessive eating, drinking, or self-indulgence of any kind, except that he partook of simple aliments of bread, milk, butter, beer, sugar, and potatoes more freely than his aged nature required, and hence he believes the generation of the parasite, detrimental to comfort, if not really to health. He tried both rowing before breakfast for two hours and other bodily exercises; also sea air and bathing in various localities; took gallons of physic and liqure potassae, rode much on horseback, and tried the waters and climate of various springs in England, as well as Turkish and vapor baths, shampooing, etc. Banting could not stoop to tie his shoe, had to walk backwards down stairs to save the jar of increased weight upon the ankle and knee-joints, puffed and blowed at every exertion, particularly going up stairs, suffered from an umbilical rupture, had to wear a truss as well as knee bandages, his sight failed and hearing became impaired, he had indigestion, heartburn, palpitation of the heart, and could not attend to the little offices which humanity required without considerable pain and difficulty, which only the corpulent man can understand.

Upon consulting Dr. Harvey, previously alluded to, he was told that all his ailments were caused principally by corpulence, and prescribed a certain diet, no medicine beyond a morning cordial as a corrective, with immense effect and advantage both to his hearing and the decrease of his corpulence. The items from which he was advised to abstain as much as possible were bread, butter, milk, sugar, parsnips, beet root, turnips, carrots, champagne, port, beer and potatoes, on account of their

containing starch or saccharine matter, tending to create fat; smoking was not prohibited. This is the diet prescribed by Doctor Harvey: for breakfast, four or five ounces of beef, mutton, kidneys, broiled fish, bacon, or cold meat of any kind except pork, owing to its fattening character; or veal, on account of its indigestible quality; a large cup of tea (without milk or sugar), a little biscuit, or one ounce of dry toast; for dinner, five or six ounces of any fish except salmon, herrings and eels (owing to their oily nature); any meat except pork or veal; any vegetable except potato, parsnips, beet root, turnips or carrots; one ounce of dry toast, fruit out of a pudding, any kind of poultry or game, and two or three glasses of good claret, sherry, or madeira; for tea, two or three ounces of fruit, a rusk or two, and a cup of tea without milk or sugar; for supper, three or four ounces of meat, or fish, similar to dinner, with a glass or two of claret—night-cap, if required, a tumbler of grog (gin, whiskey, or brandy, without sugar) or a glass or two of claret or sherry. Eggs, if not hard boiled, are unexceptionable; also cheese, if sparingly used, and plain boiled rice.



T. H. ARMSTRONG, JR.,

Who walked one mile in 6 min. 44½ sec., New York City.



EDWARD C. HOLSKE,

the Celebrated Young American Walker.

On rising in the morning, between six and seven, Banting took a tablespoonful of a special corrective cordial, not aperient, and partook of solids and

liquids as follows: about five or six ounces solid and eight of liquid for breakfast; eight ounces of solid and eight ounces of liquid for dinner; three ounces of solid and eight of liquid for tea; four ounces of solid and six ounces of liquid for supper and the grog afterwards. He took his meals as follows: breakfast between eight and nine; dinner between one and two; tea between five and six; supper at nine. His former dietary table was bread and milk for breakfast, or a pint of tea with plenty of milk and sugar, and buttered toast; meat, beer, much bread, and pastry for dinner; the tea similar to that of breakfast, and generally a fruit tart or bread and milk for supper.



## THE REDUCING SCALE.

Under the new dietary, Banting lost flesh according to the following scale:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| On | 7th | September | it was | 200 | pounds, | having | lost | 2 | poun |
| “ | 27th | September | “ | 197 | “ | “ | “ | 3 | mor |
| “ | 19th | October | “ | 193 | “ | “ | “ | 4 | “ |
| “ | 9th | November | “ | 190 | “ | “ | “ | 3 | “ |
| “ | 3d | December | “ | 187 | “ | “ | “ | 3 | “ |
| “ | 24th | December | “ | 184 | “ | “ | “ | 3 | “ |
| “ | 14th | January | “ | 182 | “ | “ | “ | 2 | “ |
| “ | 4th | February | “ | 180 | “ | “ | “ | 2 | “ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| “ | 25th | February | “ | 178 | “ | “ | “ | 2 “ |
| “ | 18th | March | “ | 176 | “ | “ | “ | 2 “ |
| “ | 8th | April | “ | 173 | “ | “ | “ | 3 “ |
| “ | 29th | April | “ | 170 | “ | “ | “ | 3 “ |
| “ | 20th | May | “ | 164 | “ | “ | “ | 3 “ |
| “ | 10th | June | “ | 164 | “ | “ | “ | 3 “ |
| “ | 1st | July | “ | 161 | “ | “ | “ | 3 “ |
| “ | 22d | July | “ | 159 | “ | “ | “ | 2 “ |
| “ | 12th | August | “ | 157 | “ | “ | “ | 2 “ |
| “ | 26th | August | “ | 156 | “ | “ | “ | 1 “ |
| “ | 12th | September | “ | 156 | “ | “ | “ | 0 “ |

Total loss of weight 46 poun

His girth during that time was reduced round the waist 12¼ inches; these desiderati were attained by the most easy and comfortable means, with but little medicine, and almost entirely by a system of diet. At the end of one year Banting asserts that he was restored in health, both bodily and mentally, had more muscular vigor, ate and drank with a good appetite, and slept well; all symptoms of acidity, indigestion and heartburn vanished; he left off using boot-hooks and other such aids, which were before indispensable; he lost all feeling of occasional faintness; left off knee-bandages, which he had worn for twenty years, and gave up a truss almost entirely.

Corpulence, says Banting, though giving no actual pain, must naturally press with undue violence upon the bodily viscera, driving one part upon another, and stopping the free action of all.

Saccharine matter is the great moving cause of fatty corpulence, producing increased weight and a large amount of flatulence; stouty matter is not so troublesome as saccharine, which largely increased acidity as well as fat. Pure genuine bread may be the staff of life, as it is termed; it is so, particularly in youth, but it is decidedly more wholesome in advanced life when it is thoroughly toasted. Any starchy or saccharine matter tends to the disease of corpulence in advanced life, whether it be swallowed in that form or generated in the stomach; that all things tending to these elements should be avoided, of course always under sound medical authority. Vegetables, and ripe or stewed fruit, are generally ample aperients. The dietary system only attacks the superfluous deposit of fat, and purges the blood, rendering it more pure and healthy, strengthens the muscles and bodily viscera, and sweetens life, if it does not prolong it.

# RECORD OF FAST PERFORMANCES
# UP TO JANUARY, 1877.
## CONDENSED FROM NEW YORK CLIPPER ALMANAC.

## ROWING.

2 miles—13min. 21½ sec., single-scull, turn, James Riley—Aug. 9, 1876.
3 miles—15min. 37¼ sec., four oars, straight, Argonauta R. A.—Sept. 8, 1875.
3 miles—16min. 32 4-5sec., six-oars, straight, Amherst University crew—best college time—July 24, 1872.
3 miles—17min. 40½sec., six-oars, turn, Ward Bros. and Jared Raymond—July 22, 1868.
3 miles—17min. 58sec., four-oars, turn, Halifax (N. S.) Fisherman crew—Sept. 4, 1876.
3 miles—20min. 28sec., pair-oar, turn, Geo. Faulkner, P. Reagan—Sept. 5, 1876.
3 miles—21min. 9½sec., single-scull, turn, Edward Hanlon- Sept. 6, 1876.
4 miles—24 min. 40sec., four-oars, turn, Ward Brothers—Sept. 11, 1871.
4 miles—28min. 30sec., single-scull, turn, Wallace Ross—Oct. 19, 1876.
4⅜ miles (about)—23min. 4sec., single-scull, straight, Geo. Tarryer—Oct. 19, 1876.
5 miles—30min. 44¾sec., four-oars, turn, Biglin Bros, and Denny Leary—Sept. 10, 1860.
5 miles—32min. 1sec., pair-oar, turn, John and Barney Biglin—May 20, 1872.
5 miles—35min. 10sec., single-scull, turn, for champion belt, Joshua Ward—Oct. 11, 1859.
6 miles—39min. 20⅗sec., four-oars, turn, Paris crew—Aug. 23, 1871.

## PEDESTRIANISM.—RUNNING.

100 yards—9¼sec., George Seward—Sept. 30, 1844.
150 yards—15sec., C. Westhall—Feb. 4, 1851; and George Forbes—Dec. 20, 1869.
200 yards—19½sec., G. Seward—March 22, 1847.
300 yards—31½sec., J. Nuttall—April 27, 1863; and D. Wight—Aug. 5, 1876.
440 yards—48¼sec., R. Buttery—Oct. 4, 1873.
600 yards—1min. 13sec., James Nuttall—Feb. 20, 1864.
880 yards—1min. 53½sec., Frank Hewitt—Sept., 1871.
1,320 yards—3min. 7sec., W. Richards—June 30, 1866.
1 mile—4min. 17¼sec., W. Richards and W. Lang, level ground, dead heat—Aug 19, 1865; in 4min. 2sec., part down hill, W. Lang; in 4min., four starts, C. Westhall.
2 miles—9min. 11½sec., W. Lang—Aug. 1, 1863.
3 miles—14min. 36sec., J. White—May 11, 1863.
5 miles—24min. 40sec., J. White, as above.
6 miles—29min. 50sec., J. White, as above.
10 miles—51min. 45sec., John Lovett—Oct. 11, 1852.
12 miles, less 100 yards—1h. 2min. 2½sec., W. Lang—April 3, 1863.
20 miles—1h. 58min. 18sec., R. Manks—Dec. 16, 1851.
50 miles—6h. 17min., G. Martin—Sept. 22, 1863.

## WALKING.

1 mile—6min. 23sec., Wm. Perkins—June 1, 1875.
2 miles—13min. 30sec., W. Perkins, as above.
3 miles—20min. 27sec., W. Perkins, as above.
4 miles—28min. 59sec., W. Perkins, as above.

5 miles—36min. 32sec., W. Perkins, as above.
6 miles—44min. 24sec., W. Perkins, as above.
7 miles—51min. 51sec., W. Perkins, as above.
8 miles—58min. 28sec., W. Perkins, Brighton, Eng., July 29, 1876.
9 miles—1h. 9min. 41sec., G. Davison, London—Dec. 6, 1869.
10 miles—1h. 17min. 33sec., G. Davison, as above.
20 miles—2h. 42min. 48sec., G Davison, as above.
21 miles—2h. 53min. 34sec., G. Davison, as above.
25 miles—3h. 42min. 16sec., J. Smith—Nov. 10, 1851.
40 miles—6h. 33min. 1sec., G. Ide—Oct. 16, 1876.
50 miles—8h. 19min. 55sec., G. Ide, as above.
60 miles—10h. 46min. 2sec., Daniel O'Leary—Oct. 16, 1875.
100 miles—18h. 51min. 35sec., W. Vaughan—May 9, 1876.
120 miles, 1,560 yards—in 24h., P. Crossland—Sept. 12, 1876.
1,000 miles in 1,000 consecutive hours—one single mile in each single hour, Captain Barclay—June 1 to July 12, inclusive, 1809.
15 miles 508 yards walked in 2 hours—George Davison—Dec. 6, 1869.

## PRIZE RING.

Longest Battle on Record—6h. 15m., James Kelly and Jonathan Smith—Australia, Nov., 1855.
Longest Battle in England—6h. 3m., Mike Madden and Bill Hayes—July 17, 1849.
Longest Battle in America—4h. 20m., J. Fitzparick and James O'Neil, Berwick, Maine—Dec. 4, 1860.

## JUMPING.

29ft., 7in., by John Howard, running wide jump, taking off from a block of wood, 1ft. wide, 2ft. long, 3in. thick, and elevated 4in.—May 8, 1854.

13ft. 7in.—Joseph Greaves, standing-wide jump—Sept. 18, 1875.

6ft. 2½in.—M. J. Brooks (Oxford University), running high jump—April 7, 1876.

47ft. 7in.—R. Knox, running hop, step and jump—August, 1870.

40ft. 2in.—D. Anderson, standing hop, step and jump—July 24, 1865.

11ft. 1in.—High pole jump, J. E. Woodburn—July 21, 1876.

## MISCELLANEOUS.

Regulation base-ball thrown 133yds. 1ft. 7½in. by John Hatfield—Oct. 15, 1872.

R. A. Pennell put up a dumbbell weighing 201¼℔—Jan. 31, 1874.

Mr. Pennock put up a 10℔ dumb-bell 8,431 times in 4h. 34m.—Dec. 13, 1870.

1,000 yards swam by E. T. Jones in 15min. 30sec.—Sept. 7, 1874.

Mr. Forbes threw a cricket-ball 132 yards, slightly aided by the wind—Oxford, Eng., March, 1876.

LIFTING.—Hand: 1,250℔, health-lift machine, John M. Cannon—Jan. 16, 1875; 1,210℔, R. A. Pennell—Nov. 8. 1873. The athletes hereinafter named are credited with having lifted the following weights; but these feats are not properly attested. With harness: W. B. Curtis,

New York, 3,300℔; Ambrose A. Butts, Auburn, O., 2,737¾℔; John J. Lucas, Belleville, Ill., 2,700℔—Oct. 26, 1875; Dr. G. W. Winship, Boston, Mass, 2,600℔. Hand lift—W. B. Curtis, 1,230℔; G. W. Winship, 1,200℔.

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## COMPLIMENTARY PRESS NOTICES ABOUT

# Health, Strength and Muscle.

From a number of very lengthy and elaborate criticisms of the press in various sections of the United States we give the following extracts:

“Here we have in condensed form a vast amount of valuable information upon a subject which should deeply interest everybody, the substance of numerous other foreign and domestic publications on like subjects mingling with impressions and advice born of the author’s observation and practical experience. A treatise on the muscular system, tables

showing the correct measurements of noted athletes and proportions of a perfect human figure, with remarkable feats of strength, etc., are also given. It is written in language clear to the understanding, and is a work which we can cheerfully recommend all to read, confident that no one can peruse it without profit to themselves."—NEW YORK CLIPPER.

"The many interesting facts and hints contained in this ably compiled work will immensely benefit everyone, it giving the cream of the best authorities upon everything concerned in its title."—PHILADELPHIA SUNDAY MERCURY.

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"Should be in the hands of all our athletes."—YONKERS (N. Y.) GAZETTE.

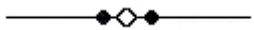
"Richly deserving of perusal. The work is not intended for professional athletes exclusively, but for all who desire to enjoy perfect physical health, which can only be acquired and retained by a proper regard for the laws of nature. Mr. James thoroughly understands the subjects of which he writes, and presents them in a straightforward, attractive manner. The book deserves to be widely read, and its teachings, if followed, will do more than doctors' prescriptions toward preserving health."—NEW YORK HERALD.

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## WHAT THE PAPERS SAY ABOUT

# "PRACTICAL TRAINING," "MANUAL OF SPORTING RULES."

# AND

Below will be found a few from the many encomiums of the New York press on the excellence of these works:

## NEW YORK HERALD.

"TREATISE ON PRACTICAL TRAINING."—At a season of the year when most needed EDWIN JAMES' "Treatise on Practical Training" has appeared. This neatly gotten-up book is full of valuable hints to athletes of whatever kind and character, having been compiled with rare judgment, which long years of laborious work in the sporting world has given its author. The unpretentious volume, among other things, contains useful chapters on Training for Rowing, Boxing, Wrestling, and Pedestrianism, in addition to instructions for High and Broad Jumping, Fair Walking, Hammer-throwing, and in fact everything else useful to the professional or amateur athlete.

## NEW YORK CLIPPER.

"TREATISE ON PRACTICAL TRAINING."—A new friend, and a most welcome one to all devoted to the pursuit of athletic exercises, has just made its appearance in the form of a neatly gotten-up book bearing the above title. It has been compiled with care and good judgment by ED. JAMES. In addition to the useful chapters on Training for Pedestrianism, Rowing, Boxing, Wrestling, etc., the book contains

instructions in regard to practice for High and Broad Jumping, Running, Fair Walking, Hammer-throwing, Hurdling, and Putting the Stone, and tells what to do in case of accident, tender feet and hands, boils, etc. "Banting's System of Reducing Corpulency," a Table of Proportional Measurements according to Height and Weight, and Records of Best Performances are also included.

## NEW YORK SUN.

MR. ED. JAMES has just published an edition of his "Practical Training for Running, Walking, Rowing, and Wrestling," embracing "Banting's System of Reducing Corpulency." It is an excellent work.

## NEW YORK SPIRIT OF THE TIMES.

"TREATISE ON PRACTICAL TRAINING."—The well-known sporting author, ED. JAMES, has just published a "Treatise on Practical Training," which gives an immense amount of condensed practical information, valuable to lovers of athletics and all kinds of sports, besides containing important Tables of Statistics, revised up to January, 1877.

## NEW YORK SUNDAY DISPATCH.

"TREATISE ON PRACTICAL TRAINING."—The celebrated sporting writer, MR. ED. JAMES, has just issued a "Treatise on Practical Training," which we can confidently recommend to every amateur and professional athlete in the land. It contains minute

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"MANUAL OF SPORTING RULES."—This is the title of a work issued by MR. ED. JAMES. It contains rules regulating Trap-shooting, Cocking Contests, Boat-racing, Prize Ring, Wrestling (different styles), Running, Walking, Jumping, Bagatelle, Lacrosse, Quoits, Rifle and Pistol Shooting, Archery, Shuffleboard, Shinny, Rackets, Handball, Swimming, Pin-pool, Fifteen-ball Pool, Skittles, Foot-ball, Knurr-and-spell, Scottish Games, Ten Pins, Skating, Curling, Fly-casting, Polo, etc. Heretofore where rules were in existence they could be procured only through private sources, or separately; but we now have them in such shape as will meet all demands. In many instances there were no rules, but the publisher has, by consultation with the leading exponents of the several games, combined with his own intimate knowledge of sporting matters, been enabled to supply such wants in a satisfactory manner. The volume is illustrated with engravings representing various games. The work should command a steady sale.

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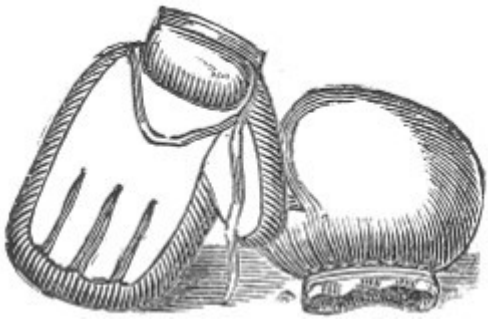


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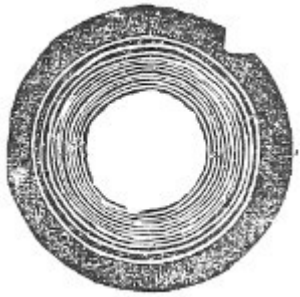
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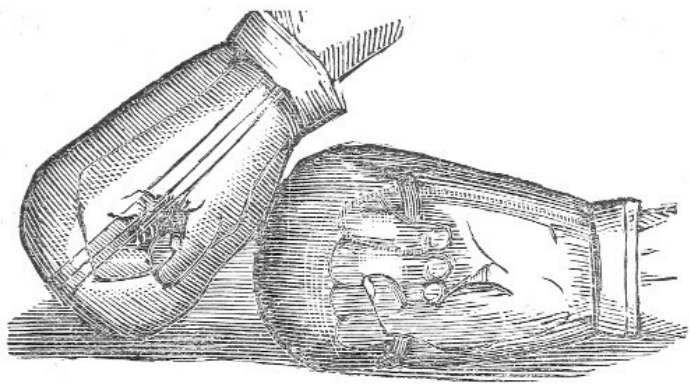
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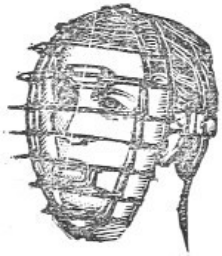
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In ordering this glove please specify that you wish THE PATENT SEAMLESS GLOVES, in order not to cause any mistakes.

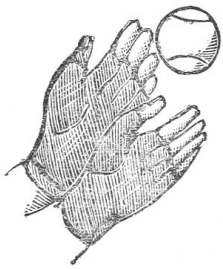
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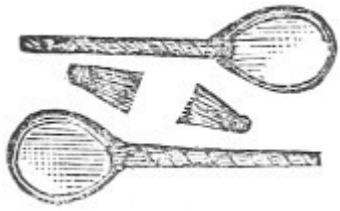


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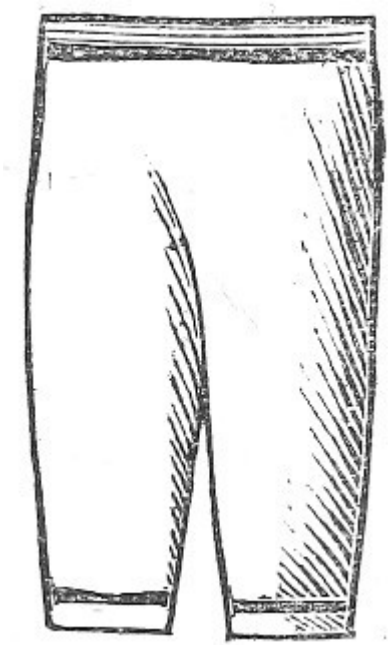
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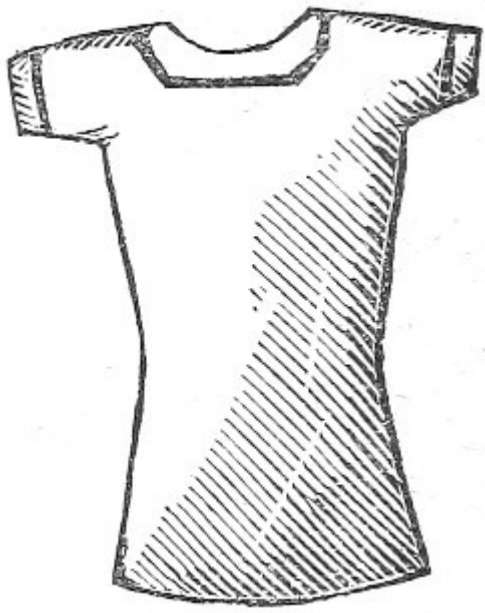
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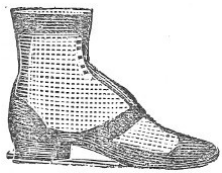
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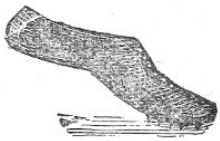
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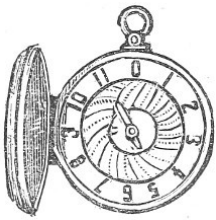
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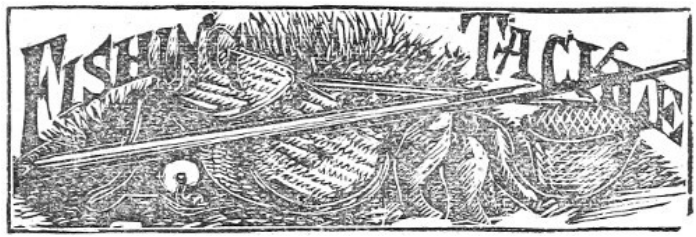


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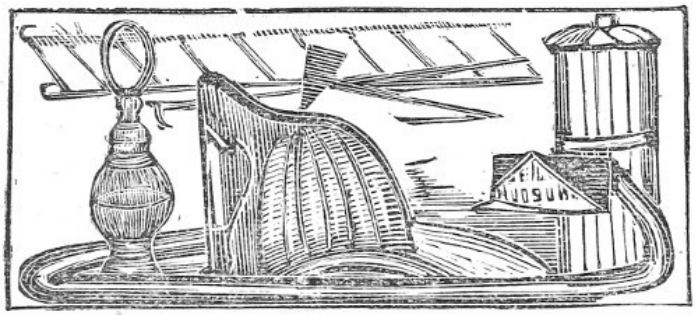
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BELTS.—Patent leather, 10 different styles, per doz., from $9 to $24.

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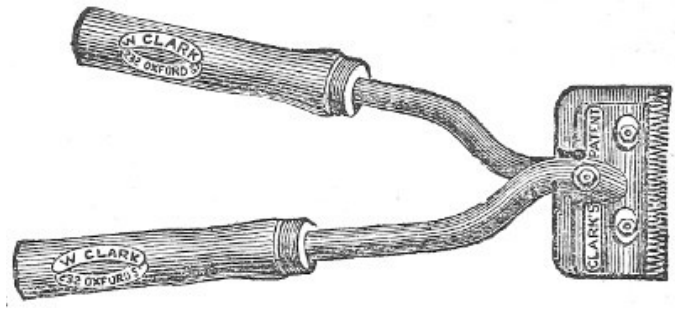

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As a parlor game for ladies and gentlemen, it has not an equal.

It has not only the accuracy and distance requisite for the common pistol target practice, but is without the expense of ammunition, and also free from the

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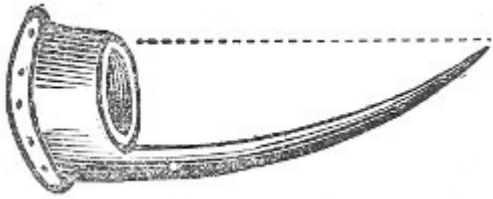
Each Rifle is put up in a neat box, with three darts and two targets. Price of Rifle, complete, $5. Darts, per dozen, $1. Targets, postage prepaid, 25 cents per dozen.




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**HORSE CLIPPER.**

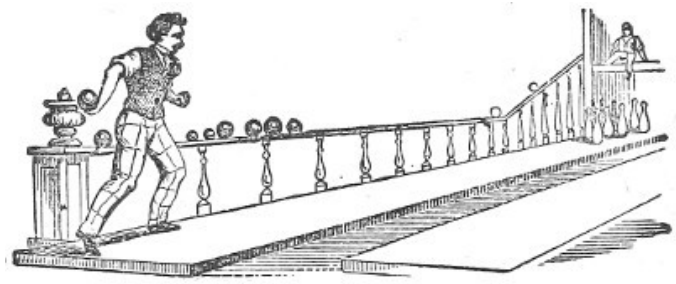
This instrument will clip a horse in two hours, and when clipped the coat is equal to a natural Summer coat. Anyone can use it. Over 200 horses have been clipped by one single machine, without sharpening. Price $**5**. The Dexter Horse Clipper. Price $8. Addler's Patent Clipping Machines, $8.50, $10.50, $12.50.

**SAWS, SPURS AND MUFFS.**



Muffs for Sparring Cocks, per set of four. $1.50. Steel Spurs.—Regulation, per pair, $5; Drop Socket, per pair, $6.50; Thimble Heels, per pair, $6.50; 3 Cornered, or Bayonet Blade, per pair, $6.50; Sword Blade, per pair, $6.50. In ordering spurs, it is necessary to name the length of blade and style required. Directions for Measuring Spurs.—The dotted line indicates the correct way of measuring. The socket does not count in measurement. Saws for sawing off the heels, finest quality, $2.50 without the knife; knife included, $3.50.

**TEN PINS AND BALLS.**



| | | |
|---|---|---|
| 4½ | inch ball | $2 00 |
| 5 | inch ball | 2 50 |
| 5½ | inch ball | 2 75 |
| 6 | inch ball | 3 00 |
| 6½ | inch ball | 3 25 |
| 7 | inch ball | 4 00 |

| | |
|---|---|
| 7¼ inch ball | 4 25 |
| 7½ inch ball | 4 50 |
| 8 inch ball | 4 75 |
| 8½ inch ball | 5 00 |
| 9 inch ball | 5 25 |
| Pins, per set | 6 00 |

**SKITTLE PINS AND BALLS.**

| | | |
|---|---|---|
| 7 | ℔ cheese ball | $3 50 |
| 11½ | ℔ cheese ball | 4 50 |
| 14 | ℔ cheese ball | 5 50 |
| Skittle pins, per set | | 12 00 |

**IVORY CROQUET BALLS.**

| | |
|---|---|
| 1⅛ inch, per set of eight | $5 50 |
| 1¼ inch, per set of eight | 6 50 |

**TROTTING AND RUNNING HORSES.**

SIZE 14×18. PRICE 30 CENTS EACH.

Judge Fullerton.
Huntress.
Commodore Vanderbilt, with running mate, and Dexter.
Tom Bowling.
Dexter against Ethan Allen.
Bassett against Longfellow.
Goldsmith Maid against Lucy, 2:17.
Dexter against Butler, to wagons.

See page 15 for other Horse Pictures, same size and price.

**LIFTING MACHINES AND LUNG TESTERS.**

Straight Gauge Lifter, $70. Dial Gauge, $90. The Lifter platform is 12×20 inches, while the gauges are silver plated. They lift from 1℔ to 800℔.

Straight Gauge Lung Tester, $45. Dial Gauge Lung Tester, $50. The Lung Tester comes in a nicely painted box, with legs to screw on, 13 inches square, 2½ feet high.

**GENUINE DIAMONDS.**

One Carat Stone, $100; Half Carat, $50; Quarter Carat, $25; an Eight Carat, $15. These may be had either spiral or with pin. Rings, same price as Shirt Pins. Diamond Clusters, from $50 to $150.

**IMITATION DIAMONDS.**

Pins or Spiral Studs, from $2 each, according to size. Rings, from $5 each. Clusters, from $5 each.



**IRA PAINE'S**
**PATENT**
**SPRING TRAPS,**
**for throwing**
**Glass BALLS**
**FOR**
**SHOOTING.**

The best substitute ever invented. Safe, simple, durable; will not get out of order.

Price Glass Balls, per 100, $3.
Cartridges, ready for use, per 100, $5.

## H. and T. TRAPS.

For Pigeon Shooting, $8.

## HAND BALLS.

$3 per dozen, or 30 cents each.

## BASE BALLS.

Professional, red or white dead ball, each $1.50.
Professional Star, each $1.
Professional Practice, each 50 cents.

## BALLOT BOXES.

Black Walnut, with white and black balls complete, $5.
Cheaper quality, complete, $3.
Gavels from $1 to $4 each.

## FRENCH POOL WHEELS.

For Trotting Courses, Fair Grounds and Saloons, 27in. in diameter, the best kind manufactured $50.
Same size but cheaper design, $30.

## TARGETS.

20 inch square in fancy colors, lead bulls-eye, wood face for darts, and fancy figure to raise when bull's-eye is hit, $5.
20 inch round target, with iron plate, bell and comic figure, $6.
Rabbit Race Target, iron, nicely painted, Calling when bull's-eye is hit. Size 10 × 24. Price $8.

## PLAYING CARDS.



Dougherty's Steamboat, assorted.
Star and calico backs, per dozen, $2.25.
Other patterns from $2.50 to $12 per dozen, according to the finish and quality.
Triplicates, round cornered, per doz., $10.
Goodall's Superior English Linen Playing Cards, from $2.25 to $18 according to finish and quality.

## QUOITS.

Nicely modelled Japanned Iron Quoits, per set of four, from $1 to $2.50.



CARD
PHOTOGRAPHS

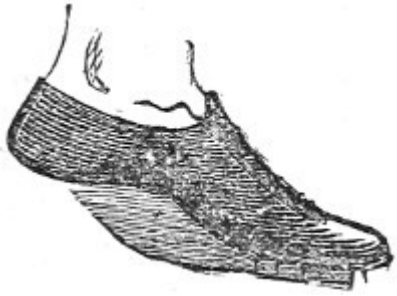
of Actors,
Actresses, Politicians
and distinguished
people.
25 cents each, 6 for $1.

**LA CROSSE.**

Bats, per pair (hickory handle), $3.50.
Balls, per dozen, $6.

**RACKETS.**

English Rackets, $6.
American Racket Bats, all wood, 50 cents.
Racket Balls, per dozen, $2.



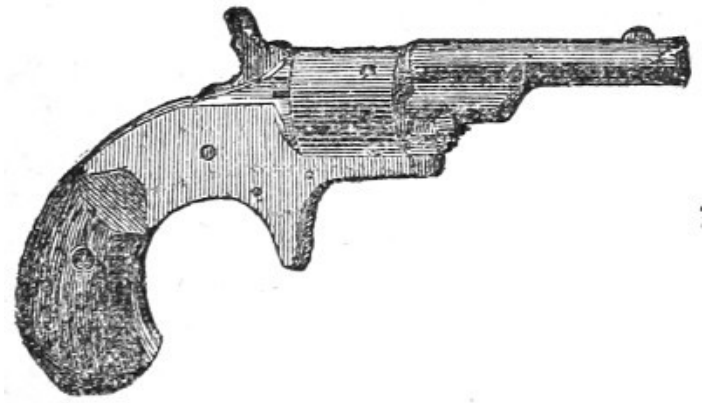
# SPORTING

## SHOES.

### RUNNING

### PUMPS,

American make, $3.50.
English imported, $7.
Welcher’s make, with steel spring shank, $8.
Welcher’s Walking Shoe, with steel spring shank $8.
Baseball Shoes, of heavy white canvas, with instep strap, $2.50.
Boating and Gymnastic Slippers, of white canvas, $1.25.
Racket Shoes, $8.



COLT'S 7-shot CARTRIDGE REVOLVER sent by mail (postage paid) to any address, on receipt of $5.

REMINGTON
RIFLE CANE
$10.

BOWIE KNIVES,
$2.50 to $5.

DARK LANTERNS,
$2 and $2.50.

## MISCELLANEOUS GOODS.

### DOG COLLARS.



Enameled Leather, Ger. Silver Trimmings.

9 to 13 inches, 50 cents.
10 to 16 inches, 65 cents.
14 to 20 inches, $1.00.
18 to 24 inches, $1.50.

Enameled, raised edges and centre, German Silver Trimmings.

9 to 13 inches, 60 cents.
10 to 16 inches, 75 cents.
14 to 20 inches, $1.25.
18 to 24 inches, $1.75.

BRASS COLLARS.

2½ to 3½in. diam., 35c.

| | | | |
|---|---|---|---|
| 2½ to 4½in. | do | | 50c. |
| 4 to 6in. | do | (with ring), | 75c. |
| 5½ to 7in. | do | do | $1.00 |

GERMAN SILVER COLLARS.

| | | | |
|---|---|---|---|
| 2½ to 3½in. | diam., | | 50c. |
| 2½ to 4½in. | do | | 60c. |
| 2½ to 3½in. | do | (with ring), | 60c. |
| 2½ to 4½in. | do | do | 70c. |
| 4 to 6in. | do | do | $1.00 |
| 5½ to 7in. | do | do | $1.50 |

Large Brass Chain Collar, from $2.

## DOG LEADERS.

Of steel or iron, platted or linked, 75 cents to $1.50 each.

Of platted leather, with tassels, 50 cents to $1.00.

## SPRING PAD LOCKS.

⅝ inch, Brass Spring, 30 cents.
¾ inch, Brass Spring, 35 cents.
⅝ inch, German Silver, 35 cents.
¾ inch, German Silver, 35 cents.

## DOG MUZZLES.

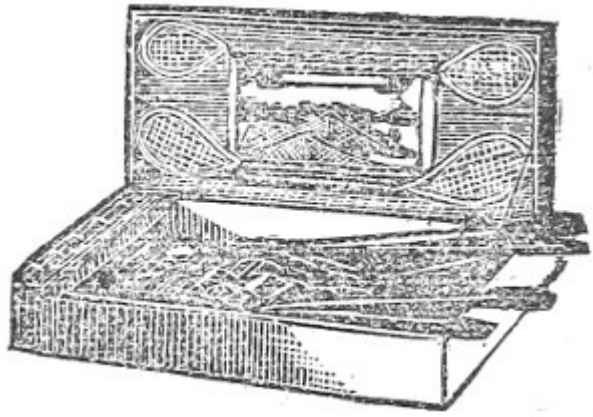
Hand made, wire frame and leather neck strap, 50c. Leather, small, closed or open snout, 50c. Wire, 40c.

## NEW SAFETY ROLLER SKATE.



The front link prevents the operators from falling forward and enables them to spring from the toe, and can walk up a steep incline, turn round and run down. The back check is to prevent falling backward; also to enable the operator to stop at will in case of danger. Can be used any place. Enables learners to use them without danger of falling and hurting themselves, which is very common with other skates. The wheels being of iron, are warranted. Price per pair, all sizes, $2.25.

## LAWN TENNIS GOODS.



Four English bats, four plain balls, two polished portable poles, in sections to pack in box; one net, 26 × 5ft.; two guy ropes and runners, four pegs, one mallet, book of rules, all complete, in box.

Price, $15.

## WHIPS.



Cowhides, Dog and Jockey Whips, from 50 cents to $1.50.

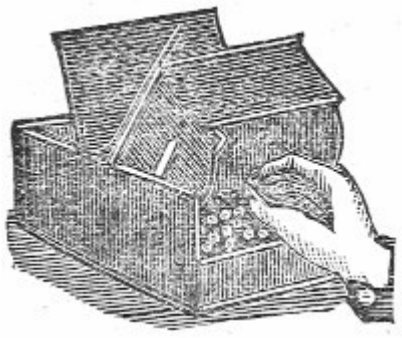
## POLICEMEN'S GOODS, Etc.



**POLICE CLUBS OR BILLETS.**

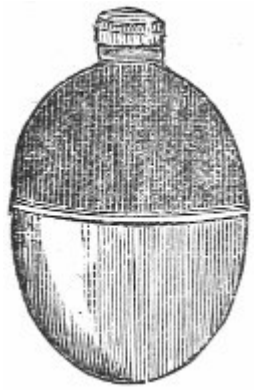
22in. $1.75, 18in. $1.25, 14in. $1, 8in. 60c.

## THE SECRET BALLOT BOX.



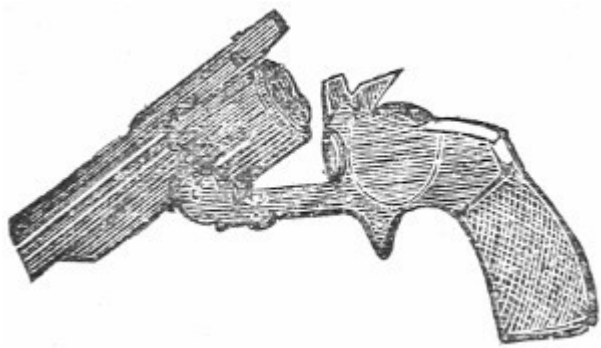
Made of Black Walnut, Fine French Polished and Lined. Can be used for Baseball, Cricket, Archery, Football, Boating, and all Sporting Clubs; also for Masonic and Odd Fellow Lodges, Temperance and all other societies. Size, 6½ × 5¼ × 6 inches. Each, $5.

## DRINKING FLASKS.



With metal screw tops, covered with roan, hog-skin morocco and Russia leathers, in ¼, ½, ¾ and pints, from $1 to $4 each.

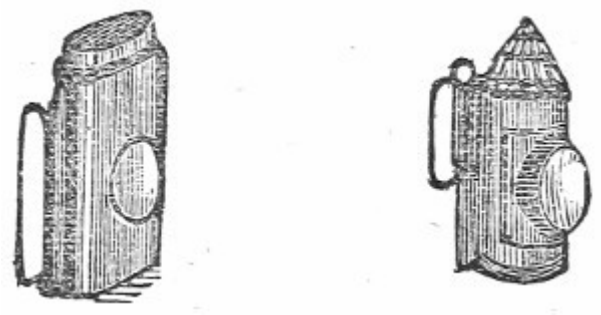
## SMITH & WESSON'S NEW MODEL.



With Patent Automatic Ejector; five shot; weight, 16oz.; calibre, 38-100; length of barrel, 3¼in. Blue,

each, $12.50. Nickel-plated, $14.

## ROUND POLICE OR DARK LANTERN.



Made of tin and painted. 3in. bull's-eye, $1.50. Flat Police or Dark Lanterns, 2in. bull's-eye, $1.25.

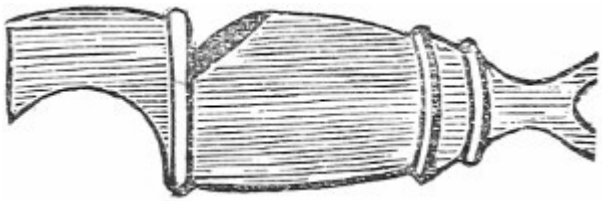
## SHELL POWDER FLASKS.



8oz $1.00

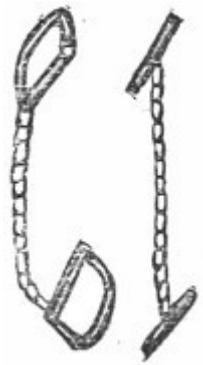
10oz $1.50
12oz., extra fine, $3.00
16oz., extra fine, $3.50

## WHISTLE.



Polished metal, with rattle, 30c.

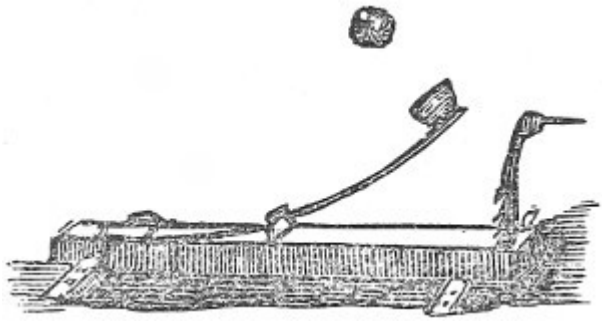
## NIPPERS AND CUFFS.



Police Nippers, Chain, nickel-plated, per pair, $1.25. Police Nippers, patent spring, the best made, $2.00. Handcuffs, polished, $4.00. Handcuffs, polished, for conveying three prisoners

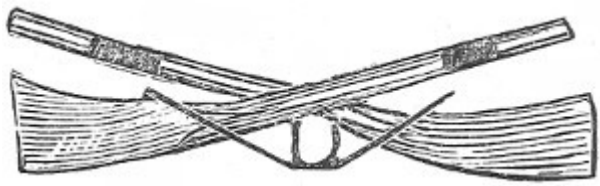
together, $6.00.

**THE BOGARDUS PATENT**
**Glass Ball Trap and Rough Balls.**



These Traps and Balls, patented by Bogardus, and used by him many thousand times, prove to be just what is wanted by all sportsmen's clubs and amateurs. $6 each. The Patent Rough Ball.—The only ball that will break sure when hit by shot. Every ball marked. Patent Rough Glass Balls, $2 per hundred; Patent Filled Ball, $2 per hundred; Smooth Glass Balls, $1.75 per hundred. The above balls are packed three hundred in a barrel, ready for shipping.

Field, Cover and Trap Shooting, by Bogardus. Price, $2.50.



## SPOON OARS.

| | | | |
|---|---|---|---|
| Leathered and coppered, | | 7 to 7½ft., | $3.50 |
| do | do | 8 to 9ft., | $3.75 |
| do | do | 10ft., | $4.00 |
| With buttons, right and left, | | 9 to 10ft | $6.00 |
| Plain spruce oars, | | per foot | 15c. |
| Plain ash oars, | | per foot | 12c. |

## ROWLOCKS.

| | | |
|---|---|---|
| Side plate, | brass, per pair | $2.50 |
| do | galv. iron, pr pair | $1.25 |

## CLEATS AND CHOCKS.

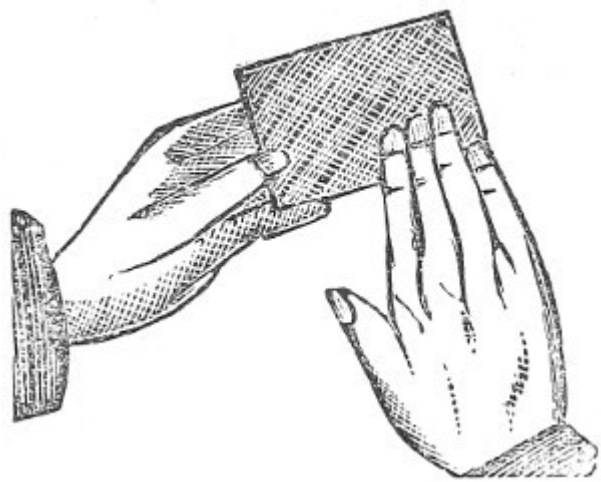
| | | | |
|---|---|---|---|
| Galv. cast iron, | | per lb | 14c. |
| do | do | chocks, per lb. | 14c. |

## TACKLE BLOCKS.

Galv. malleable iron, with wrought hooks, length 2½ to 3½in. each 50c. to $1.50

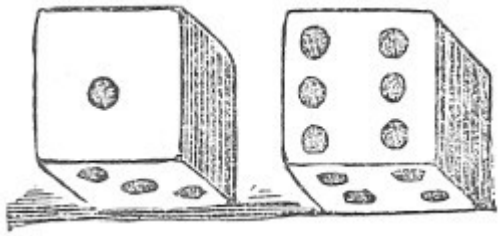
## RUDDER BRACES.

Galv. malleable iron, per doz. sets $3.25 to $4.50



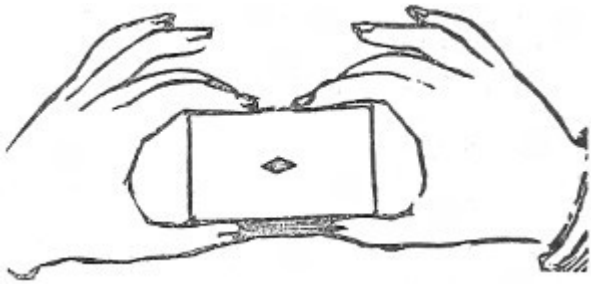
Readers or trick cards, as used by magicians and others, puzzling everybody not in the secret. Price, with full directions, per pack, $1.

## WINNING DICE.



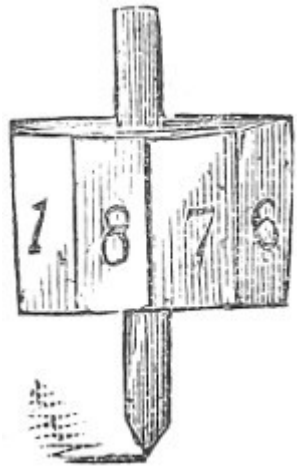
Of best ivory, three high, three low and three square. Price per set of nine, with directions for use, $5.

## Strippers or Magic Euchre Cards.



By means of which the most celebrated card tricks known can be performed without practice. Per pack, $1.50.

## TOMMY DOD TOPS.




Will spin high or low, as desired. Of best ivory, with explanation of the secret, $3.00.



# THE NEW
## AIR GUN.
## $16

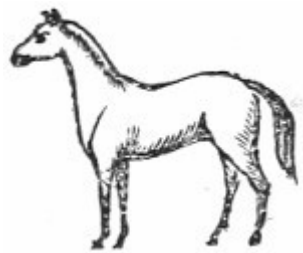
Self charging, no crank, no lever, loads at breech by letting down the barrel, shoots either darts or bullets; a profitable acquisition to shooting galleries and saloon keepers. Weight, 6℔. Full length, 36 inches. Also the New Air Gun, improved, same style as

above, solid rifled barrel, with firing pin, will throw a No. 22 cartridge accurately 600 feet, and can also be used in a parlor or saloon as an Air Gun for darts and bullets. Extra finished stock, complete, with firing pin, $30. Either of the above, full nickel plated, $5 extra. Darts, by mail, $1.50 per dozen. 14 inch paper targets, 50 cents per dozen; 8 inch, 25 cents; fancy 20 inch target, with Comic Figure, to raise when bull's eye is hit, $5 each; or iron face for bullets, $6.

## REVOLVERS.

The Governor Pocket Revolver, for No. 22 cartridge, 7 shots, $6. Swamp Angel Revolver, 5 barrel Derringer $13. National Revolver, 6 barrels, nickel plated, $10. Derringers, per pair, $18. Colt's Navy Revolver, with mould $15. Knuckle Revolver, 7 shot, $10.75. Ethan Allen Revolver, 7 shot, weight 6oz., $9. The Terror, 6 shot, weight 13oz., $12. Bull Dog, 5 shot, weight 14oz., $13.

## HORSE GOODS.



Jockey Cap, silk, any color, to order, $3.50.
Weight Boots, per pair, from 4 oz. to 1½ lb., $5.50.
Boston Reins, $12.

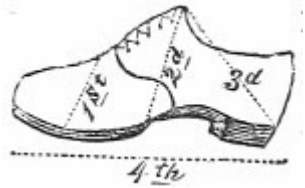
Holders for Reins, $3.50.
Shin Boots, $6.
Lolling Bit, $6.
Derby Bandages, per set of four, $5.
Knee Boots, for protecting above and below the knee, $10.
Toe Boots, per pair, $6.
Spurs, per pair, $1 00 to 6 00.
Whips, Gutta Percha, 8 ft., $4.25; 4 ft., $2.

## MASONIC, ETC.

Gold Enameled Slipper, $2. Gold Square and Compass, $3. Gold Three Links, $2. Gold Printers' Composing Stick, $2.50. Trowel, with coral handle, $3.

## THEATRICAL GOODS, ETC.

Red Clogs, all sizes, with jingles, from $3. per pair upwards. Directions for measurement:—




No. 1, Measurement around foot at toe.
No. 2, Measurement around foot at instep.
No. 3, Measurement around heel over instep.
No. 4, Measurement of length of foot.

Silver Clogs, $7. Ankle Boots, $8.

Sandals, $8. Song and Dance Shoes, 15in. long.

Spangles, silver or gold, from $2.50 per lb. upwards. Worsted Knee Tights, trimmed, scroll spangled, $14. Knee Tights, with velvet leaves, and flowers spangled, $17. Tamborine, large size, brass rim and screws, $3. Moccasins, per pair, $2.50. Helmets, each, from $8 to $15. Plain Steel Armor Cloth, per yard, $2. Shell Armor Cloth, per yard, $3. Harmonicon, with mouthpiece, $4.50. Bones, rosewood, 75 cents per set; ebony, $1.25. Burnt Cork, prepared and ready for use, 50 cents a box, or $2 per lb. Colored Fire, for tableaux and fairy scenes, $2 per lb. Mongolian, in a paste, for Indians, etc., per box, 60 cents. Prepared Whiting, for clowns, statuary, etc., not affected by perspiration, per box, 60 cents. Pencils, for eyebrows, 60 cents; Pencils, for veins, 60 cents. Lightning, per box, 60 cents. Moonlight light, for statuary, etc. 40 cents per package.

## AMERICAN RACE HORSES.

STEEL ENGRAVINGS.
SIZE 18 × 24. PRICE 60 CENTS EACH.

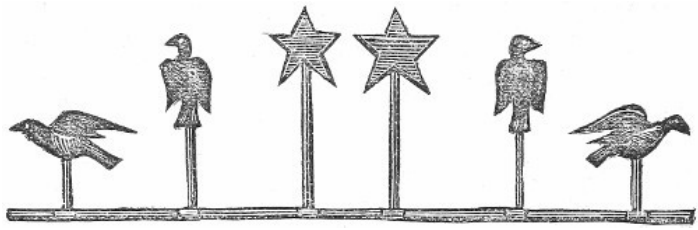
Col. W. R. Johnson, of Virginia, the Napoleon of the Turf.
Boston.
Gray Eagle.
Shark.
Black Maria.
John Bascombe.
Monmouth Eclipse.
Ripton and Confidence in their celebrated Two Mile and Repeat Match over the Centreville, L. I.,

Course, in 1842.
Imported Leviathan.
Wagner.
Imported Monarch.
Imported Hedgeford.
Fashion.

## MISCELLANEOUS GOODS.

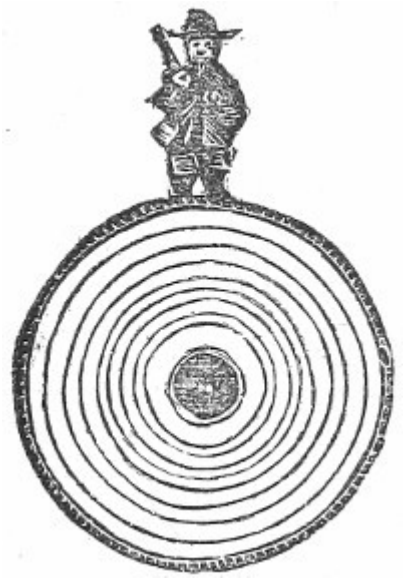
Fine Silk Umbrella, $5. Fine Silk Umbrella, with gold plated cup, $6. Double Nine Dominoes, $6 per set. Dice Boxes, leather, per pair, 50 cents. Large Ivory Dice, 20 cents each. Sporting Knife, with screw, saw, hoof digger, etc., $1.50. Hunting Knife, 10in. long, $2.50. Bowie Knife, 10in. long, $2.50. 14in. Leather Checker Board, $2.50. 15in. Leather Checker and Backgammon Board, $4. Rubber Suit (boots and pants), $15. Pewter Mugs (half pints), per dozen, $12. Dog Couplings, used in coursing, $3. Bezique Box, $2. Dark Lantern, $1.50. Signal Lamp, for Mast Head, $5. Side Light, for vessels, $7. Decoy Duck, with movable head, $2.25. Genuine Black Thorn Stick, $2. Cuckoo Clock, $20. Patent Stilts, per pair, 50 cents. Abdominal Supporters, $6. Shoulder Brace, $6. Stockings for Varicose Veins, per pair, $6. Ear Trumpets, $2.50, $6 and $10. Respirator, for consumptives, $2. Loaded Dice, three high, three low, and three square, $5 the set; Gymnastic Morocco Slippers, $2.25. Rattlesnake Game, or Going Around the Horn, 50 cents. Magic Tobacco Box, 50 cents. Magic Cigar Case, $1.50.

## MISCELLANEOUS GOODS.



Falling Birds and Stars, falling back when hit. Made for out-door shooting. Iron, for cap and shot, $5. Set by a rope from stand.

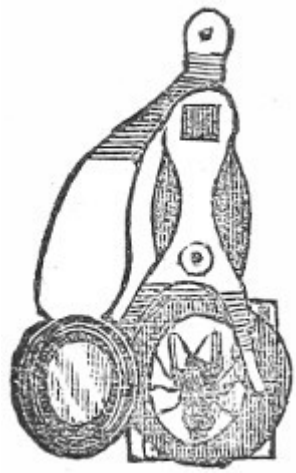
## MECHANICAL TARGETS.



Plain Round 18-inch Target with 12-inch iron plate, for cap and shot, comic figure rising and ringing a gong when bull's-eye is hit. Nicely painted, set by a rope from stand, $5. Rooster, small chick springing on his back when bull's-eye is hit, iron, for cap and shot, 14 × 16in., $2.50. Eagle, opening his wings

and ringing a bell when bull's-eye is hit, iron covered, for cap and shot, 28 × 28in., $6.

## THE ABBOTT POCKET MICROSCOPE.



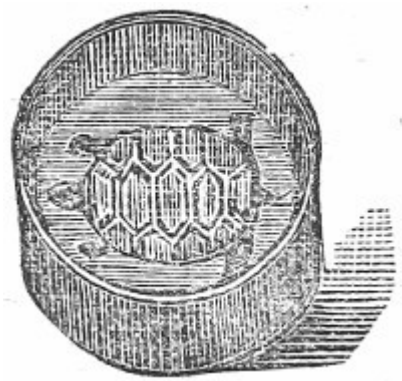
It examines, in focus, whole insects, bugs or worms, alive or dead, transparent or opaque, feet up or down, confined in a cage—which is a part of the instrument—while in motion or in fixed position without harming the insect; also for examining seeds, flowers, plants, minerals, fabrics, engravings, bank notes, etc. Price $1.

## COMPASSES.



CHARM COMPASS, gold plated.—¾in. in diameter, 50 cts.; 13-16ths in. in diameter, fine, 75cts. FLOATING DIAL COMPASS, for yachts and boating.—2½in., brass, each, $1.50. HUNTING AND FISHING COMPASS—1¾in., brass, each, $1.25. HUNTING-CASE COMPASS, with stop—2in., $2.50.

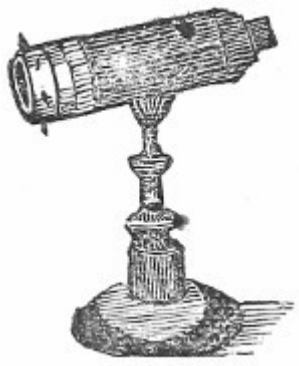
## TURTLE SLEEVE BUTTONS.



Nickle-plated, 50 cents.

MAGIC TURTLE, all alive, a great curiosity, at 30 cents.

## THE PARLOR KALEIDESCOPE.



Elegantly mounted on walnut stand, and furnished with revolving brass Object Box, containing transparent tubes filled with liquids of the most brilliant colors. Price, complete, each, $3.

# MINSTREL AND THEATRICAL GOODS.

## NEGRO MINSTREL GOODS.



BURLESQUE Song-and-Dance SHOES (buff), 15 inches long, per pair, $7.

SONG-AND-DANCE CAPS, flannel, long peak, $1; fine opera flannel, $1.50; satin, $2; silk, $2.50.

PREPARED BURNT CORK, per box, 50c.

**TIGHTS—As Shown in Cut.**




Full length cotton, flesh, white or black, per pair, $2.50; in fancy colors, same style, $3; fine worsted, black, white, or flesh color, $4; in fancy colors, $5.

**Measurements**

1. Around waist.
2. Full length.
3. From crotch to heel; also, give the length of foot.

## STOCKINGS.



In any color or colors, long lengths to come over the knee, all wool, per pair, $1.

| | |
|---|---|
| Extra heavy quality | $1 50 |
| Fine worsted, plain | 2 00 |
| Fine worsted, fancy | 2 50 |
| Worsted, striped | 3 50 |
| Worsted, striped up & dow | 9 00 |

BONES, per set, Rosewood, 50c., 75c., $1; Ebony, $1.25.

FOR MUSICAL INSTRUMENTS, *see another page*.

## KNEE BREECHES.



Worsted (various colors), trimmed with gold or silver lace, per pair, $10.
Velvet (any color), trimmed, fancy scroll, spangled, per pair, $15.

## DANCING CLOGS.



Red or blue, with jingles, per pair, $3.; black calfskin, per pair, $4; black Balmoral, per pair, $5; Silver or gold leather, $7; Dutch Clogs, all wood, per pair, $3.

## LEOTARD SHIRTS.



Worsted Leotard Body and Body Shirt, $3.50 each.
1. Around chest under arms.
2. Around hips.
3. From crotch to neck.

## EQUESTRIAN SHIRTS.

Theatrical Shirts, white, black, or flesh color, $2

each; in fancy colors, $2.75; fine worsted, black, white, or flesh color, $4; in fancy colors, $5.

## THEATRICAL WIGS.




**Measurements.**

**No. 1.**

From forehead to nape of neck.

**No. 2.**

Around the head.

**No. 3.**

From ear to ear across the crown.

**No. 4.**

From ear to ear across forehead.

Gentlemen's Dress Wigs, with natural parting, $10 each; of ordinary color, extra red or light, $18 to $20; Bag Wig, continental style, $5; Bald Wigs,

according to shade and quality, from $5 to $15; Yankee Wig, ordinary colored hair, $5; Yankee Wig, very light or extra red, $10 to $15; Irish Crop Wigs, ordinary color, $4.50; Irish Crop Wigs, white grey, $4.50; Dutch Character Wig (Gus Williams), $5; Indian Wigs, $5; Judge and Jury Wig, $10; Clown Wig, $5; Pantaloon Wig and Beard, $6.

## NEGRO WIGS.

Plantation, or Short Crop, per doz., $12; Astrachan ditto, each, $4.50; Hat Plush ditto, each, $3; Middle-men or End-men, each, $2; Wench or Topsey, each, $5; Fright, each, $6; Bald Negro Wigs, with whiskers and eyebrows, $4..

## MOUSTACHES.



Full Beard with Moustaches, $2 to $5.
Military Whiskers with Moustaches, $1.50.
Moustaches or Imperials, 50c.
Combination Beard, in four parts, which can be used for full Beard, Side Whiskers and Goatee, or Dundreary's, with and without Moustache, from $3 to $6.

## COLORED FIRES.

| | |
|---|---|
| Lightning, per box | 0 50 |
| Moonlight light, for statuary, pr box | 0 50 |

| | |
|---|---|
| Colored Fires, any color, in half-pound boxes, per box | 1 00 |
| Tableau Lights, for parlor use, any bright color, each | 0 25 |
| Fire-eating Preparation, per box | 0 50 |

### COSMETICS.

| | |
|---|---|
| Prepared Burnt Cork, per box | 0 50 |
| Clown White, per box | 0 50 |
| Eyebrow Pencils, each | 0 50 |
| Mongolian Paste for Indians, per box | 0 50 |
| Pencils, for veins, each | 0 50 |

## BASEBALL, CRICKET, AND CROQUET GOODS.

### BASEBALL GOODS.



CLUB OUTFITS.

Outfit No. 1, embracing Shirt, Pants, Cap, Belt, Hose, Shoes and Spikes, complete, per man, $9.
Outfit No. 2, same as No. 1, but of inferior goods, per man, $7.

## BASEBALLS.

P. & S. New Treble Ball, red or white, per dozen, $15; each, $1.50.
P. & S. Professional Ball, red or white, per dozen, $12; each, $1.25.
P. & S. Amateur Ball, red or white, per dozen, $9; each, $1.

## BATS.

Ash, Bass, Spruce or Willow, per dozen, $2.50; Light American Willow, half polished, per dozen, $5; Sapling Ash, wound and waxed handles, per dozen, $6; American Willow, loaded at handle with ash, per doz, $8.

## FLANNEL SHIRTS.



First quality, any solid color with letter or number on shirt, $36 per doz.; $3.25 each. Second quality, $33 per doz.; $3 each. Third quality, cheaper style of flannel, $27 per doz.; $2.50 each.

First quality opera-flannel, any color, stripe or check, $32 per doz.; $3.75 each.

## FLANNEL PANTS.

First quality, of any solid color desired, $36 per doz.; $3.25 per pair. Second quality, $32 per doz.; $3 per pair.

## SHOES.



Oxford or Low Cut, made of fine white canvas, with patent spikes, $34 per doz., $3 per pair. Ditto, without spikes, $24, $2.25 per pair.

Balmoral or high cut, made of fine canvas, with leather, instep straps, etc., and with patent spikes inserted between the soles when made. The spikes can be taken out and put in the soles in two minutes' time, and the shoes worn in the streets without injury, $36 per doz., $3.25 per pair.

## CAPS.

Leading styles, flannel, any colors, $6, $8, $12, per doz.; Jockey Club shape, $9, $12, $15, per doz.

## STOCKINGS.



First quality goods, long lengths, $10 per doz. pair, $1 per pair. Second quality goods, long lengths, $6 per doz. pair. Extra quality goods, all wool, and long lengths. $27 per doz. pair; $2.50 per pair. Extra quality goods, all wool and long lengths, cotton feet, $24 per doz. pair; $2.25 per pair.

## BELTS.



American Union Web, different colors, 2½ inches wide, 24 to 36 inches long, black leather finish, double straps and buckles, $3.50 per doz.

## CRICKET GOODS.

| | |
|---|---|
| Cricket Bats, all patterns, with bag, each, $1 to | $12 00 |
| Cricket Balls from $1.25 to | 4 00 |
| Wickets or Stumps and Bails, per set, from $2.25 to | 3 50 |
| Leg Guards, from $3.50 to | 6 00 |
| Knee Pads, per pair | 3 25 |
| Abdominal Protector | 2 50 |
| Open Palm Batting Gloves, per pair | 5 00 |
| Batting Gloves, ordinary tubular | 3 50 |
| Wicket-keeping Gauntlets, tubular | 5 00 |
| Long-stop Gloves, per pair | 3 50 |
| Belts, each, from 75c. to | 1 50 |
| Morocco and Leather Belts, stitched, painted names sunk in, $2 to | 3 00 |
| Cricket Score Books, each $2 and | 3 00 |

## CROQUET GOODS, *per set*

BOXWOOD.—The most durable set made; superior in every respect; separate compartments for the balls; with patent design Mallets, in chestnut case $15 00

BEACH, OR ROCK MAPLE.—Imitation Boxwood. This is the best set that can be made from these fine American woods. Patent design Mallets, in chestnut case 9 00

ROCK MAPLE.—French polished. A very handsome and durable set. Patent design Mallets 7 50

SELECTED HARD WOOD.—Thoroughly made and varnished; a handsome set; patent design Mallets 6 00

HARD WOOD.—Good selection of hard wood; barrel-shape Mallets; handsomely striped; full set and very durable. Balls and Mallets varnished 5 00

HARD WOOD.—Barrel-shape Mallets; substantially made. One of the best cheap sets made in this country. Balls varnished 4 00

HARD WOOD.—Oil finish 3 00

YOUTH'S SET.—Good selection of hard wood; well made and varnished; strong and durable 4 00

YOUTH'S SET.—Hard wood; oil finish 3 00

# ATHLETIC GOODS.

## SLEEVELESS SHIRTS.



Cotton Tights (no seams), solid colors, $30 per doz., $2.75 each.
Same as above, in stripes, $36 per doz., $3.25 each.
Extra fine qualities, knit from worsted, in solid colors, $48 per doz., $4.25 each.
Same as the above, in stripes, $54 per doz., $5 each.
Any of the above, with Initial Letters, Anchors, Oars, Stars, etc., extra, $8 per doz., 75 cents each.

## KNEE TIGHTS.



Of cotton, solid colors, $27 per doz., $2.50 each.

Extra fine quality, knit from worsted, in solid colors, $45 per doz., $4 each.

Stripes knit in either of the above, extra, $3.50 per doz., 35 cents each. Also imported goods of cheaper qualities, furnished when desired at 20 per cent. less than the above prices.

## TRUNKS.



Cotton, any colors, $12 per doz., $1.25 each; good quality, $18 per doz., $1.75 each; heavy worsted, $24 per doz., $2.25 each; extra fine worsted, $30 per doz., $2.75 each.

## SKULL CAPS.

Cotton, any colors, $9 per doz., $1 each; heavy

quality, $12 per doz., $1.25 each; fine worsted, $18 per doz., $1.50 each.

## ENGLISH BOATING SHOES.

White canvas, leather soles, $2.50 per pair; white canvas, extra strong rubber soles, $4 per pair.

## WHITE CANVAS SLIPPERS.



Low cut, with draw strings, $12 per doz. pairs; extra quality, with eyelets and laces, $15 per doz. prs.

## GYMNASIUM BELTS.

English Web, $1; Union Web, fifty cents.

## RUNNING SHOES.



American Spiked Running Shoes (buff), per pair, $3.50.

Best imported Spiked Running Shoes (black), per pair, $7.

## Hydraulic Rowing Machine.

Single machine, complete and ready for use, $30; two machines, one seat, two levers, $55; four machines, four seats, four levers, $110.

## HEALTH LIFT MACHINE.

A complete gymnasium for men, women and children. Elastic, reactionary and cumulative. Price, complete, $30.

## Patent POCKET GYMNASIUM.

Over fifty different Exercises can be performed with this apparatus. No. 1, for children from 4 to 6 years, $1; No. 2, for children from 6 to 8 years, $1.10; No. 3, for children from 8 to 10 years, $1.20; No. 4, for children from 10 to 14 years, $1.30; No. 5, for ladies and children 14 years and upward, $1.40; No. 6, for gentlemen of moderate strength, $1.50; No. 7, $2; complete set of seven, $9. No. 7. is fitted with a screw-eye and hook to attach to the wall or floor. Two of this size, properly arranged, make a complete gymnasium.

## Improved HORIZONTAL BARS.

For Gymnasium, Stage or Parlor. It can be fixed easily in a few minutes in any room, and as quickly removed; and is adapted for both sexes and all ages. The fastenings are most ingeniously arranged to adjust the bar to any height. Height of upright, eight feet; it can be adjusted as low

as four feet, and regulated to use from a four to a six foot bar. With two pairs of the Iron Stanchions, very strong and neat Parallel Bars can be made. Horizontal Bars made of the best young hickory wood, and finely finished. Price $1.25, $1.50, $1.75, $2, $2.25, $2.75, and $3.25 each. Size, 3½, 4, 4½, 5, 5½, 6, and 6½ feet. Price, with everything complete, $25.

## PULLEY MACHINES.

10℔ to 100℔ each. No. 1, without weights, $20; No. 2, on platform, $25; weights for the above, per pound, 6c.

## FENCING STICKS.

Basket handle, per pair $1 50.

## BOOKS ON ATHLETICS.

Prof. Wm. Wood's "Manual of Physical Exercises," $2.

Dr. Dio Lewis' "New Gymnastics for Men, Women, and Children," 300 illustrations, $1.75.

Ed. E. Price's "Treatise on Sparring and Wrestling," 75c.

Kehoe's "Work on Indian Club Exercises," $1.25.

Ed. James' "Treatise on Practical Training for Running, Walking, Rowing Boxing, Wrestling, Jumping," etc., etc., 50c.

Ed. James' "Manual of Sporting Rules," governing in and outdoor pastimes, 50c.



**AMERICAN BAR TENDER,**
**containing over 100 Summer and Winter Drinks.**
**50 cents.**

**HOW TO MIX DRINKS.**
**BY**
**Jerry Thomas.**
**130 pages, $1.**

## ROLLER SKATES.

Sixes, 7, 8¼, 9¼, 10¼, 11¼in. foot-plate.

This skate is neater, lighter, and more durable than any skate yet offered. The foot-plate is of sheet-iron, with mountings (well secured) which will not cause pain or injury to the feet. The axle runs through a steel collar upon which the wheel revolves, thereby preventing friction. The roller is made of solid vulcanized rubber, and will not become soft or peel off when in use.

Per pair, $2, $3, $4, $4 50.

## CHESS MEN.



| | |
|---|---|
| Boxwood, 8 sizes, per set, | $2 00 to $6 50 |
| Hardwood, 5 sizes, per set, | 1 25 to 3 00 |
| Bone, 4 sizes, per set, | 4 00 to 8 00 |
| Traveling chess-board, mahogany, draw out, bone men, small and large, per set, | $4 00 to $6 00 |

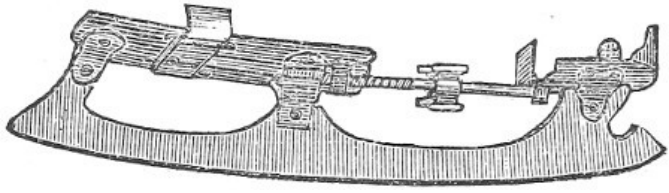
## CHECKER MEN.

| | |
|---|---|
| Lignumvitæ and Boxwood, 1¼ inches. Black walnut box, per set | $1 00 |
| Bone, 1¼in., black walnut box | 4 00 |
| Checker and Chessmen combined | 1 50 |

## DOMINOES.

| | |
|---|---|
| Bone, per set | $1 00 to $3 00 |

## CLUB



## SKATES.

## STRAPPED, with heel button.

Sizes, 8, 8½, 9, 9½, 10, 10½, 11, 11½in.

Japanned sheet-iron foot-plates, converted steel runners, steel heel button, strapped with broad toe straps. Per pair

$1 25

## MEDIUM QUALITY.

Sizes, 8, 8½ 9, 9½, 10, 10½ 11, 11½in.

Stamped Eagle, No. 3, well finished, blued foot-plate, right and left screw, improved guides, per pair

$2 00

## HALF-ROCKER.

Sizes, 9, 9½, 10, 10½ 11 inches.

Half-rocker welded steel and iron runners hardened, French polished beech woods, mounted with heavy brass heel and toe plates, very highly finished, pierced for 1¾ inches, broad toe straps, per pair

$2 00

## NEW YORK CLUB.

Sizes, 8, 8½, 9, 9½, 10, 10½, 11, 11½in.

Blue finished, steel foot-plate, polished runners, same quality and style as nickel plated, per pair

$3 00

## ALL CLAMP STEEL.

(See cut above.)

Sizes, 8, 8½, 9, 9½, 10, 10½, 11, 11½in.

In constructing this skate, no new or untried mechanical principle for obtaining the desired motions and power is employed. The transverse sliding clamp for grasping the sole, operated and held by means of pins and slots, is a mechanical device long and successfully employed on skates; which, with the single and directly acting heel clamp and longitudinal screw, make this the most desirable of all clamp skate in the market. All of the important parts of these skates are made of steel; and the runners are manufactured of the best welded steel and iron, carefully tempered.

| | |
|---|---|
| No. 9, Nickel Plated, per pair | $5 50 |
| No. 8, Blue Top, per pair | 4 50 |

## LADIES' SKATES.

Sizes, 7, 7½, 8, 8½, 9, 9½, 10 inches.

Monitor pattern, solid post frame skate, tempered runners, polished beech woods, trimmed with black leather, broad toe and heel straps, roller buckles, brass plates, per pair.

$2 00

Address ED. JAMES, 88 and 90 CENTRE STREET,

New York City.

## RARE ENGLISH SPORTING PRINTS.

Westminster Dog Pit, representing a dog fight in this famous pit in the last century. Size 16×22. Price $1.50.

Crib and Rosa, two high bred bull dogs. Size 16×20. Price $1.50.

Bubble and Squeak, terrier and rat. Size 18×20. Price $1.50.

Rat Catcher, dog killing rats. Size 12×15. Price $1.50.

Cocker and Woodcock. Size 16×13. Price $1.

Spaniel and Wild Duck. Size 16×13. Price $1.

Setter and Grouse. Size 16×13. Price $1.

Pluck, small black and tan dog, with large rat. Size 19×24. Price $1.50.

Bull Broke Loose, bull baiting with dogs in the olden time. Size 16×22. Price $1.50.

Pot and Kettle Race, two dogs with pot and kettle tied to their tails. Size 16×21. Price $1.50.

Pugilist, monkeys as pugilists, with seconds, etc. Size 15×16. Price $1.50.

Duelist, monkeys fighting a duel. Size 15×16. price $1.50

Lurcher and Rabbit. Size 16×13. Price $1.

Retriever and Pheasant. Size 16×13. Price $1.

Pointer and Partridge. Size 16×13. Price $1.

Derby Day. Size 27×50. Price $20.

English Race Horses, winners of the Derby and Ascot, beautifully colored. Size 18×22. Price $5.



## THE SET-TO.

Two Game Fowl in the act of fighting, beautifully colored lithograph. Size 14 × 18. Price 50 cents.

## DR. COOPER'S GREAT WORK
## ON
## GAME FOWL.

Over 300 pages, with two elegant chromos. Price $5.

## PIGEON SHOOTING PLATE.

The Great Championship Pigeon Shooting Match between John Taylor and William Seeds, the "Jersey Boy," giving portraits of over 50 celebrated shots. Tinted lithograph. Size 28 × 48. Price $2.50. Beautifully colored, price $3.50.

## SPORTING WORKS.

American Racing Calendar, $1.
Racing Rules, 50 cents.
Trotting Rules, 50 cents.
Frank Forrester's Horse of America, 2 vols., $15.
Pigeons: their Variety, Management, Breeding and Disease. By Hugh Piper. 75 cents.
Sweet's Elements of Draughts, for beginners. 60

cents.
Sweet's Ready Reckoner. 50 cents.

## LIVE STOCK.





Below are given prices of birds, animals, etc. (express charges not included), which invariably have to be prepaid by express and money forwarded in advance. No live stock sent C. O. D.

| | |
|---|---|
| Maltese Cat | $10 00 |
| 6℔ Black and Tan Terrier | 40 00 |
| 8℔ do | 25 00 |
| Bull Terrier, from | $25 to 100 00 |
| Italian Greyhound, from | 30 to 75 00 |
| Scotch Terrier, from 20 to | 50 00 |
| Skye Terrier, from 20 to | 50 00 |
| Newfoundland, from | 30 to 100 00 |
| Coach Dog | 35 00 |
| Retriever, from | 25 00 |
| Fox Hound | 40 00 |
| Setter | 40 00 |
| Pointer | 40 00 |
| Beagle Hound | 40 00 |

| | |
|---|---|
| Ferrets, per pair | 30 00 |
| Game Fowl, $10 each, or the trio | 25 00 |
| Parrot, from | $12 to 50 00 |
| Parroquet | 8 00 |
| Cock of the Rock | 75 00 |
| Silver Pheasant and Hen, per pair | 50 00 |
| Monkey, from | 15 to 25 00 |
| Canary, from | 5 to 10 00 |
| Anaconda Snake, from | 50 00 |
| Cockatoo, from | 20 00 |
| Mocking Bird, from | 25 00 |

## VETERINARY INSTRUMENTS.

| | |
|---|---|
| Metal Horse Syringes, 24, 36 and 48 oz., $3 50, $4 50, | $5 50 |
| Brass Horse Syringes | 13 00 |
| Reed's Patent Injection Pump, best | 35 00 |
| Reed's Patent Injection Pump, plain | 23 00 |
| English Imported Horse Tooth Rasp | 5 00 |
| English Imported Horse Tooth Rasp, guarded | 6 25 |
| Two Fold Case Veterinary Instruments | 18 00 |
| Three Fold Case Veterinary Instrum'ts | 27 00 |
| Pricking Knives, 1, 2 and 3 blade, plain $2 50, $3 25 and | $4 00 |
| Pricking Knives, 1, 2 and 3 blade, spring back $2 75, $3 50 and | 4 25 |
| Castrating Clamps $4 00 and | 10 00 |
| Castrating Eraseur | 17 00 |

| | |
|---|---|
| Set of Hobbles | 35 00 |
| Firing Irons | 3 00 |
| Balling Guns, wood | 2 50 |
| Balling Guns, brass | 3 50 |
| Elastic Horse Catheders | 3 00 |
| Metalic Horse Catheders | 3 00 |
| Seton Needles, plain $1 25 and | 1 75 |
| Seton Needles, long screw, 3 parts. | 4 25 |
| Horse Fleams, 1, 2 and 3 blades $2 25, $2 75 and | 3 25 |
| Tracheotomy Tubes, metal | 7 50 |
| Tracheotomy Tubes, hard rubber | 5 25 |
| Spring Lancets | 3 25 |
| Tooth Forceps, from | 6 00 |
| Clipping Shears $1 75 and | 2 25 |
| Clipping Combs, horn | 75 |
| Clipping Combs, steel | 75 |
| Apparatus for Singing with gas $6 50, | 18 00 |
| Apparatus for Singing, with alcohol $2 50, | 5 00 |
| Trocars and Canulus | 3 75 |
| Hypoderme Syringes $3 75 and | 6 00 |
| Silver Milk Tubes | 2 00 |
| Horse Muzzle | 7 50 |
| Small Nippers | 2 25 |
| Baldwin Bit $2 50 to | 5 00 |
| Bit to Prevent Wind Sucking | 3 00 |

# MUSICAL INSTRUMENTS.

## BANJOS.



All BANJOS here described are 11 inches in diameter.

| | *Each.* |
|---|---|
| Tack head, sheepskin, with walnut handle | $2 50 |
| 6 plain screws, sheepskin, walnut handle, iron hoop | 3 25 |
| 6 eagle brackets, sheepskin, walnut handle, brass hoop | 5 00 |
| 6 eagle brackets, calfskin, walnut handle, brass hoop | 6 00 |
| 10 eagle brackets, stained rim, calfskin, walnut handle, brass hoop | 7 00 |
| 8 shields, stained rim, rosewood veneered handle | 8 00 |

## PROFESSIONAL BANJOS.

| | *Each.* |
|---|---|
| 10 brackets, fine head, fret, walnut handle, and oak rim | $8 50 |

| | |
|---|---|
| 16 brackets, fine calf head, walnut handle, oak rim | 10 50 |
| 16 brackets, polished veneered rosewood handle and rim | 12 50 |
| 16 brackets, extra fine rosewood veneered handle and rim | 15 00 |
| 16 brackets, extra fine solid rosewood handle and veneered rim | 21 00 |
| 10 brackets, German silver rim, lined with wood inside, walnut fretted handle | 13 00 |
| 16 brackets, German silver rim, lined with wood inside, walnut fretted handle | 15 00 |
| 16 brackets, German silver rim, lined with wood inside, inlaid handles | 13 00 |
| 18 brackets, German silver rim, lined with wood inside, solid rosewood | 25 00 |

## DOBSON'S "IMPROVED PATENT BANJOS."

PATENTED FEBRUARY, 1873.

| *No.* | | *Each.* |
|---|---|---|
| 400 | 8 screws, im rosewood rim, cherry neck, brass trimmings | $7 60 |
| 405 | 10 screws, im rosewood rim, walnut neck, brass trimmings | 8 50 |

| | | |
|---|---|---|
| 410 | 12 screws, im rosewood rim, cherry neck, brass trimmings | 9 50 |
| 415 | 14 screws, im rosewood rim, walnut neck, fretted brass trimmings | 10 50 |
| 425 | 14 screws, im rosewood rim, nickel plated trimmings | 5 00 |
| 430 | 16 screws, im rosewood rim, nickel plated trimmings | 17 00 |
| 435 | 20 screws, rosewood rim, nickel plated trimmings | 21 00 |
| 440 | 20 screws, inlaid rosewood rim, nickel plated trimmings | 24 00 |
| 445 | 20 screws, inlaid rosewood rim, nickel plated trimmings, metal tailpiece | 30 00 |
| 450 | 20 screws, inlaid rosewood rim, nickel plated trimmings, covered back | 30 00 |
| 455 | 20 screws, brass rim, new style, with nuts inside | 21 00 |
| 460½ | 20 screws, brass extra fine rim, nickel plated trimmings | 25 00 |
| 465 | 20 screws, German silver rim, nickel plated trimmings | 25 00 |
| 470 | 20 screws, German silver rim, nickel plated trimmings | 30 00 |
| 475 | 20 screws, German silver rim, new style, with nuts inside | 25 00 |

The patent consists mainly in the application of an

entirely new style of screw and clamp, the latter catching upon the metal hoop, and the screw passing through it and into a solid ash rim, forming for itself a thread almost as durable as one of metal, and producing an equal and powerful pressure upon the flesh hoop.

The advantages of this banjo over all former patents are many, and comprise, mainly, a power of tone never before attained in a low-priced banjo; extreme lightness, durability, and an attractive appearance, which assures the dealer of a ready sale.

On ALL these Banjos we use the best quality French calf head, Italian strings, and thoroughly seasoned wood for the necks and rims.



## TAMBOURINES.

| | TACK-HEAD TAMBOURINES. | *Each.* |
|---|---|---|
| 10 | inch, sheepskin | $1 50 |
| 12 | inch, sheepskin | 2 50 |
| 10 | inch, calfskin, stained rim | 3 00 |
| 12 | inch, calfskin, stained rim | 3 50 |
| 10 | inch, calfskin, wooden rim lined with brass | 4 50 |
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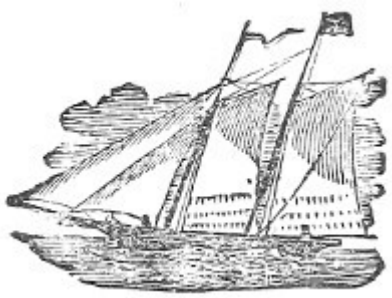
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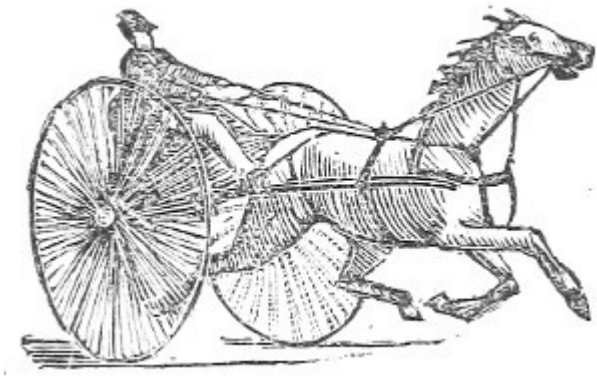


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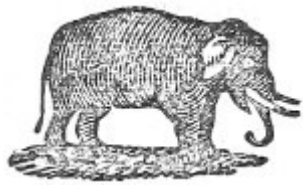
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|---|---|---|---|
| 1 | in., | . . . per hundred, | |
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| 1⅛ | “ | “ “ | 4.00 |
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